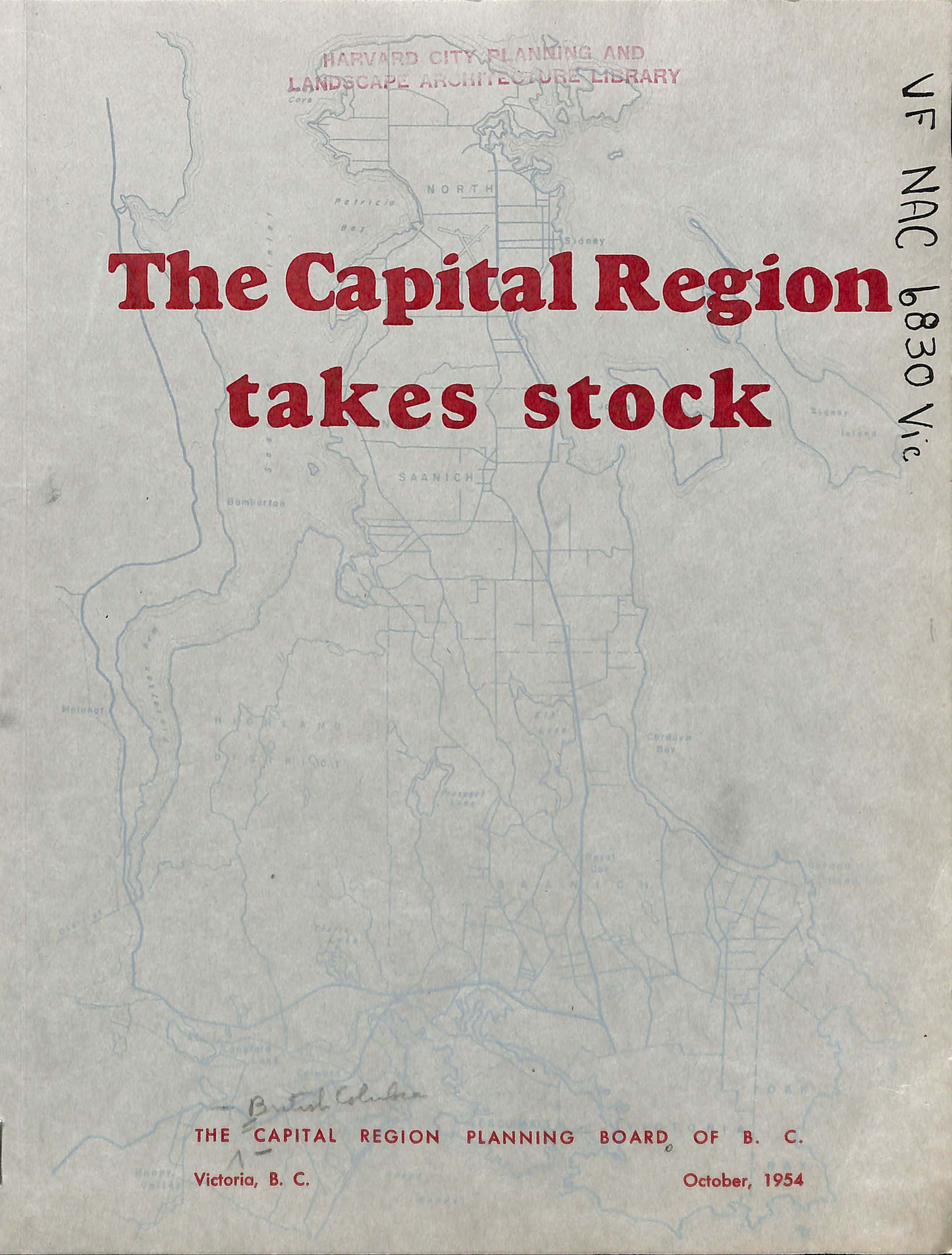

The Capital Region takes stock

THE CAPITAL REGION PLANNING BOARD OF B. C.

Victoria, B. C. October, 1954

CAPITAL REGION PLANNING BOARD OF BRITISH COLUMBIA

The Capital Region Planning Area includes the District of Central Saanich, the Township of Esquimalt, the District of Oak Bay, the District of Saanich, the City of Victoria, and part of the unorganized territory of the Saanich peninsula. It was established in 1951 by the Minister of Municipal Affairs under the authority of the Town Planning Act. The Capital Region Planning Board of British Columbia consists of one member appointed by the Provincial Government and one member appointed by each of the municipalities within the region, and is charged by the Act with the duty of preparing plans for the physical development of the Region.

MEMBERS

Chairman F. W. Nicolls, M.R.A.I.C.	Provincial Government
Councilor S. P. Birley	Oak Bay
Councilor J. E. Carey	Esquimalt
Major H. C. Holmes	Victoria
Mrs. Grace Shaw	Saanich
No Member Appointed	Central Saanich

ADVISORY MEMBERS

H. D. Dawson, P. Eng.	Saanich
John Graeme, P. Eng.	Esquimalt
Cyril Jones, P. Eng.	Victoria
A. S. G. Musgrave, P. Eng.	Oak Bay
Brahm Wiesman, M.R.A.I.C.	Planning Director
Mrs. Elsie W. Shepherd	Honorary Secretary
J. W. Wilson, P. Eng.	Consultant

CAPITAL REGION PLANNING BOARD

VICTORIA, B.C.

October 26, 1954

The Minister of Municipal Affairs, Government of the Province of B. C., Mayors, Reeves, and Members of Council of the Capital Region Planning Area of British Columbia.

Gentlemen:

We are pleased to present herewith a report, based on a preliminary survey of the Capital Region, entitled "The Capital Region Takes Stock", which represents the completion of the first phase of the preparation of plans for the orderly development of the region. This report is a study of the broadest factors affecting the future development of the region. It does not deal with all the factors which the Board must consider before a detailed Regional Plan can be prepared, it is intended only to form the background for future planning. In publishing this report the Board is of the opinion that it will be valuable and informative to all levels of government, to business, industry, home owners, and the general public.

The next step in the work of the Board will be the detailed consideration of the recommendations contained therein and the preparation of further studies of those factors affecting the future physical development of the region. An analysis of these surveys will lead to the determination of the overall land requirements within the region for such varied uses as agriculture, residences, parks, schools, business, industry, government, major thoroughfares, parking and public services.

To achieve this objective the Capital Region Planning Board has recently appointed Brahm Wiesman, M.Arch., M.R.A.I.C., A.R.I.R.A., as Planning Director. Mr. Wiesman who was recently the Assistant Director of Planning of the City of Edmonton, is now establishing a permanent office with a qualified technical staff which will be responsible to prepare plans for and to advise on the physical development of the region.

The Board wishes to express its warmest thanks to J. W. Wilson, P.Eng., Consultant to the Board, and his colleagues, and to all the other individuals and agencies who have assisted in the preparation of this report.

Respectfully submitted,

CAPITAL REGION PLANNING BOARD OF BRITISH COLUMBIA

F. W. Nicolls

FWN:es

F. W. Nicolls, Chairman

The Capital Region Planning Board,
Victoria, B.C.

Madam and Gentlemen:

I am happy to present to you the report which in January, 1954, you requested me to prepare. It has been an engrossing task and I hope that you will deem the results satisfactory.

This report has three aims (1) to acquaint the people and governments of the area with their Region and its resources (2) to assemble information about the Region as a basis for the work of the Board's permanent staff (3) to study and analyze the development and problems of the Region and make recommendations regarding them. It is essentially the kind of general examination which, in medicine, precedes more detailed diagnosis and prescription. It is just as necessary for good planning as for good medicine.

The report has been condensed and simplified with general publication in mind, and statistical material in particular has been kept to the minimum. It is backed by a voluminous collection of maps and statistics.

As in any democratically governed society, the people of the Capital Region have their fate in their own hands. If this report stimulates them to see themselves as members of a regional family, to look ahead and to resolve to make the most of their enviable heritage, it will have achieved its purpose.

Yours sincerely,

J. W. Wilson.

J. W. Wilson,
Consultant

Vancouver, B.C.
October 12th, 1954

Three centuries ago the poet Milton uttered the following words, which might well have been addressed to the people of the Capital Region today:

"Accuse not Nature, she hath done her part. Do thou but thine."

ACKNOWLEDGMENTS

Prior to starting this survey I was solemnly warned that the municipalities would not cooperate, and that I would not get much help from "the government." I therefore take particular pleasure in publicly stating that the prophets could not have been more wrong. I met only one refusal in seven months' work and scores of people went out of their way to assist me. If I mention the following in particular, it is only because they made major contributions and space forbids a longer list:

First and most of all, my industrious and long suffering chief assistant, Mrs. M.L. Crerar, B.A.; Sydney Glover and Rolf Thomassen; the members of the municipal staffs, especially the municipal engineers and their assistants; Dr. A.L. Farley; Mrs. E.W. Shepherd; Mr. W.H. Currie; the Bureau of Economics and Statistics, B.C. Department of Trade and Industry; the Water Rights Branch and the Air Surveys Division, B.C. Department of Lands; the Extension Branch, B.C. Department of Agriculture; the Mineralogical Branch, B.C. Department of Mines; the B.C. Power Commission; and the B.C. Electric Company; and lastly, traditionally, inevitably and sincerely, my wife. To them all and to many unmentioned - many thanks.

To the members of the Capital Region Planning Board I give special thanks for unfailing courtesy, for frank but kindly criticism of drafts, and, most of all, for their confidence in me during this pioneering stage.

J. W. Wilson

C O N T E N T S

I THE CAPITAL REGION

The Region studied in this report consists of the Greater Victoria area, the Saanich peninsula and the area stretching east to Sooke and lying south of the Esquimalt and Nanaimo Railway Land Grant boundary.*

This area was chosen for study for several reasons:

1. It contains almost all the land on the southern tip of Vancouver Island which is suitable for development. In addition, it is fairly well defined by mountains and the sea.

2. It consists of two interdependent parts - a rural hinterland, which supplies farm produce and opportunities for outdoor recreation, and a metropolitan centre which provides urban employment, trading facilities, professional and commercial services, entertainment and transportation facilities.

3. It is served by a common network of roads, power and telephone lines, and, to a large extent, water supply mains.

Thus in many ways this region is an indivisible whole, knit together by common interests, so that many of its problems can be tackled only as whole problems and not on a piecemeal basis.

This explains the main task of the Region Planning Board, which is to prepare plans for and advise the municipalities and the Provincial Government on the development of the Region without regard for municipal boundaries.

The Region and its relationships with other areas are shown on the diagram on page 2.

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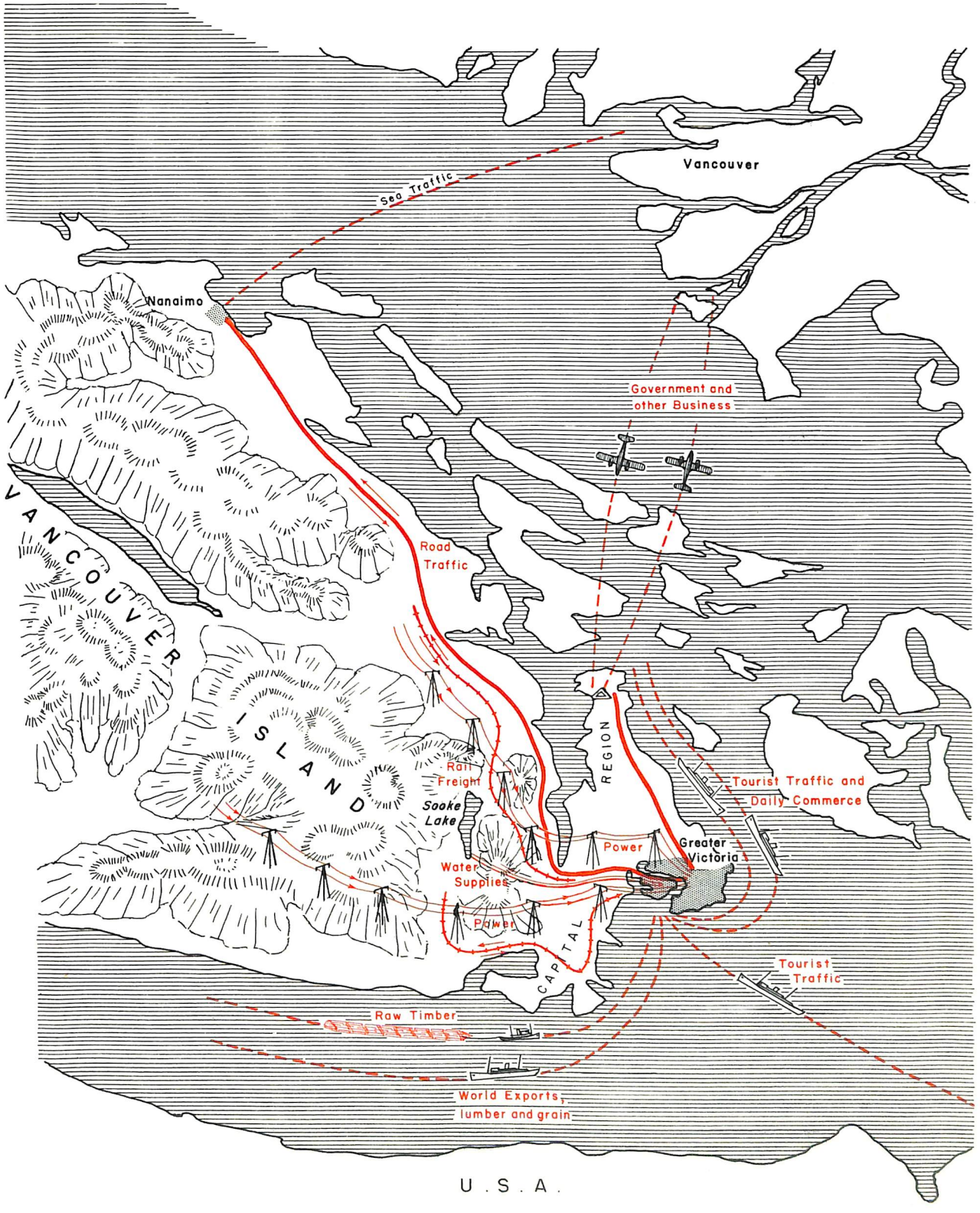
*It may be noted that this region is larger than the Capital Region planning area defined by the Minister of Municipal Affairs in 1951, which extends only as far west as Thetis Lake. The Sooke-Metchosin area, however, will become more important as the Greater Victoria area expands, and has therefore been included in this survey.

THE REGION AND ITS SETTING



II A BACKWARD GLANCE

There can be few cities which belie their history as Victoria does. What is there now to suggest violent changes of fortune or the frenzy of a gold rush? ....But it was so.

Victoria was really conceived in 1843 as a result of mass American immigration into Oregon, then disputed territory. This made it clear that Fort Vancouver, established by the Hudson's Bay Company on the banks of the Columbia River, would not long remain in British hands. So the Company established a new trading post at Fort Victoria, which was a seaport, offered a good defence position against the Americans, and had a good agricultural hinterland. The outlook for the fort was broadened a little in 1849 when Vancouver Island was declared a Crown Colony open for settlement, and colonists began to arrive.

Then suddenly two tidal waves struck - the gold rushes, in the Fraser River in 1858 and the Cariboo in 1862. As British Columbia's only seaport, and the point where claims were registered and licenses issued, Victoria became a mecca overnight, and miners poured in. Even during the Klondike Stampede in 1898, there has never again been anything quite like this period, when sailing ships from San Francisco, Australia and elsewhere added 26,000 people to Victoria's population in four months.

But more enduring, if less frantic events took place, in 1865 when an order-in-council from London established the Royal Naval Dockyard in Esquimalt on a permanent footing, and in 1868 when Victoria was proclaimed capital of the new Crown Colony of British Columbia. This was followed in 1871 by confederation with the rest of Canada, an event with a special significance for Victoria. Sir John Macdonald had promised that the transcontinental railroad would be continued through to Esquimalt via Bute Inlet and Seymour Narrows. This promise was not carried out, the railway finishing instead at Vancouver, which then leaped ahead as B.C.'s major seaport. This was probably the most fateful event in the history of the Capital Region. The Esquimalt and Nanaimo line, however, was completed in 1886 and did a great deal to open up the island. In the meantime the Canadian Pacific Navigation Company had been formed and started its trade with China.

By this time Victoria, which had once been largely a fur trading centre, now had a wider economic base. This is shown by the following export figures for 1890 quoted in the Victoria Times:

Fisheries	$ 2,207,000
Gold	491,000
Furs	385,000
Manufactures	34,000

In 1911 catastrophe struck at the sealing industry which had been one of the city's mainstays since the seventies. Pelagic sealing was stopped by international treaty, putting an end to Victoria's

sealing fleet, which at its peak numbered about 70 vessels. This did not stop development however. The tourist trade had long been established and was flourishing and immigrants were pouring in from Britain. This continued up to World War I when many men went to the forces or into munitions work in the East.

The decade following the war was a slow one for Victoria despite the opening of the Panama Canal in 1920. The 1930-40 decade, on the other hand, despite the depression, saw the population of the Region increase considerably, much of it due to migration from the prairies. A new trend of great if not immediate significance was started in 1937 when the first Trans Canada Airlines flight to Victoria took place. Then came the Second World War, with activity on the Pacific which gave Victoria an entirely new importance. By the end of the war the flood-tide of development and immigration was running to the West, and with it, Victoria. The tide is still running.

As the century rolled erratically along, the face of the area changed continuously, sometimes by face-lifting methods, sometimes by more natural growth. As regards the former, even in this decade of rapid suburban expansion we must think with respect, if not incredulity, of the Cariboo Gold Rush period in 1862 when 225 buildings were erected in the tiny community in six weeks. By 1864, two years after Victoria was incorporated as a city, the old fort, 150 yards square, had been demolished and had given way to a more spacious business centre. By 1874 the community had grown to the point where its earlier spring water supplies were no longer adequate and a pipe was laid from Elk Lake to the city - a major undertaking in these days. Similar milestones in development followed with the inauguration in 1890 of the electric street car system which operated five cars on six miles of track, and the completion of the Parliament Buildings in 1897 and the Empress Hotel in 1908.

Evidence of the growth of the area in general was given by the incorporation of Oak Bay and Saanich in 1906, followed by Esquimalt in 1912. This was a period when a house could be built for 1000 to 1500 dollars. It was also a real estate boom period which saw subdivision "explode" to the north and east. When the boom collapsed many areas had been subdivided which were to lie undeveloped for more than thirty years. The community, however, gradually overspilled the boundaries of the City of Victoria until after the Second World War when it took a great outward surge. This new (and current) period has seen the secession of Central Saanich from Saanich and the incorporation of the Village of Sidney.

The gradual development of the Greater Victoria area is traced in the diagram on page 6.

III THE PEOPLE AND THEIR WORK

1. The People Today:

Today the Capital Region contains about 123,000 people, distributed roughly as follows:

Victoria	53,500	43 percent
Saanich	32,500	26
Oak Bay	13,100	11
Esquimalt	10,600	9
Central Saanich	2,200	2
Sidney	1,100	1
Unorganized	10,000	8
	123,000	100 percent

Several things about the population deserve comment:

1. About 75 percent of the people live in the Greater Victoria urban area. In 1931 this percentage was about 67 percent. In other words, more people are settling in the town than in the rural areas.

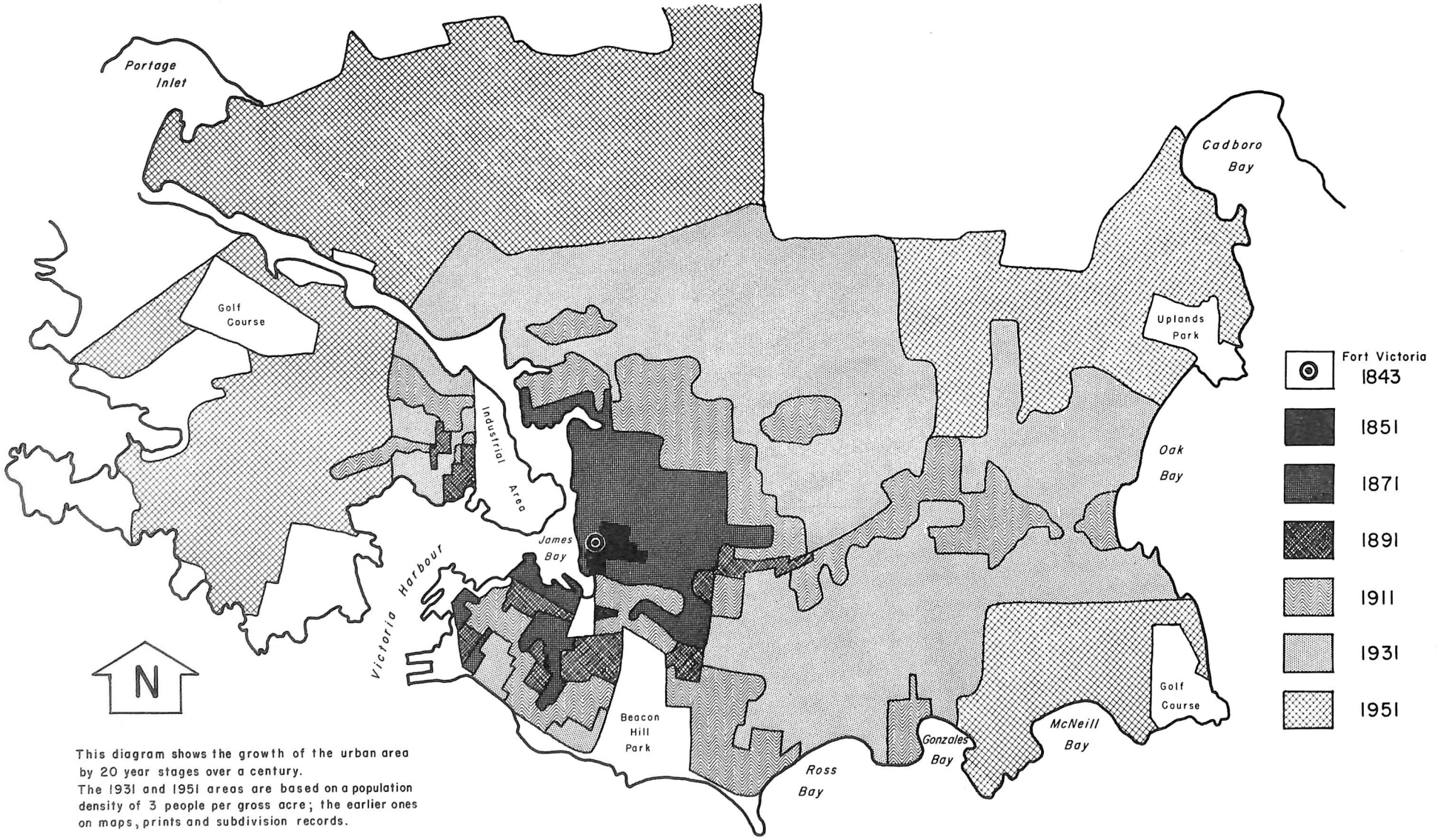
2. Two thirds of the population increase since 1941 has been due to immigration. That is, for every baby born in the Region, two people have come to settle from outside.

3. The population contains a very high proportion of older people, about 16 percent being over 65 years as against 11 percent for B.C. and 8 percent for Canada. Closely related to this is the number of retired people. In 1951, 13 percent of all males were listed as retired, while the corresponding figure for the whole province was only 9 percent. (In other words, there is almost one retired man for every four men in the labour force.)

   This trend has been developing for several decades. In 1931 the percentage of people over 65 was 9.2; in 1941, 11.9 and in 1951, 15.9. Under the influence of the still-falling death rate and the Region's mild climate, the trend is expected to continue, although probably not at the same rate as before.

4. The average family, which contains 3.0 people, is smaller than the average B.C. family of 3.3 people. Related to this is the relatively low proportion of school children which is 18 percent as against 21 percent for the whole province.

A CENTURY OF GROWTH



This diagram shows the growth of the urban area by 20 year stages over a century.
The 1931 and 1951 areas are based on a population density of 3 people per gross acre; the earlier ones on maps, prints and subdivision records.

5. The birth rate is a little low, having averaged 22 per thousand from 1947 to 1951 as against 24 for B.C. The death rate, on the other hand, has been high, averaging 12 per thousand for the same period as against 10 for B.C.

6. The proportion of people living in apartments has been increasing steadily for thirty years. For example, in 1921 only 2 percent of all the families in the City of Victoria lived in apartments; in 1951, 31 percent did. This is a very significant trend, for if it continues, the metropolitan area will become not only bigger but also more densely populated. This will be most marked in the City of Victoria despite the relative scarcity of clear land, as apartments take over unused lots or replace older homes. It will cause increased loads on water mains, sewers and drains. This factor is relatively unimportant in the other municipalities as yet, but they also can expect more apartments as time goes on.

These characteristics vary considerably from municipality to municipality, as shown in Appendices A, B and C.

2. The People At Work:*

What do the people work at? In particular what are the "basic" industries of the region rather than its "community-service" occupations, for it is they which largely govern its growth.**

It is estimated that in the spring of 1954 about 48,000 or 39 percent of the people in the region were gainfully employed.[x] Of these, about 32,000 worked in "community-service" occupations and 16,000 in "basic" industries. Of the latter, three out of every four were directly dependent on either the federal or the provincial government. In other words one out of every four employed people works for some branch of the federal or provincial government. In this degree of dependence on government employment, the Capital Region is

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*For details see Appendices D, E and F.

**The distinction between "basic" and "community-service" industries is best explained as the difference between the family wage-earner, who brings in the all-important paycheck, and the housewife, who sees to all domestic needs but does not add to the total purchasing power of the family. The same distinction can be drawn between economic activities within a region.

[x]This is not an unusual proportion. Compare 40 percent for Greater Vancouver and 42 percent average for Montreal, Quebec, Toronto and Winnipeg in 1951.

second in Canada only to the Ottawa area.* A rough breakdown of the working population is shown on the diagram on page 10.

There is, however, another important element in the economic structure of the Region, namely the large number of people who draw their income from investments. This is shown by the fact that 12 percent of all taxable income for the Greater Victoria municipalities in 1951 was derived from investments, as against 6 percent for the province as a whole.

It is obvious, therefore, that the future of the Capital Region depends primarily on the development of both Canada and British Columbia and on the activities and policies of their governments. To a less extent it depends on a continuing influx of retired people, on tourist trade, and on manufacturing industries which, directly or indirectly, utilize nearby raw materials.

3. The Economic Outlook:

What is the outlook for these activities?

Government: The future for both Canada and British Columbia has been painted in glowing colours too often to need repetition here. If this vision is realized, the tasks of participating in international affairs, governing their people, and administering the development of their vast resources will inevitably result in the expansion of both the federal and the provincial administrations. Thus, barring any major changes in administrative policy by either government, the federal and provincial civil service will provide an expanding source of employment in the Capital Region. In the case of the defence services it can only be said that their establishments seem to be expanding rather than contracting.

Retired population: The flow of retired people to the Region has increased markedly in recent years and is expected to continue to do so.

Tourist Trade: Tourist traffic in both Victoria and British Columbia as a whole has been increasing on the average by about 7 percent per year since 1948.** In this respect British Columbia is faring better than the rest of Canada, but several signi-

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*In Ottawa about 32 percent of the labour force works for government; in the Capital Region, 23 percent.

**Travel Between Canada and Other Countries 1952, The Queen's Printer, Ottawa, 1953, and Annual Report 1953, Victoria and Island Publicity Bureau.

ficant trends are worthy of note (1) that relatively, Canada has been losing ground to Mexico and Europe (2) that Americans are spending more vacations in their own country (3) that Canadians are spending more time and money on vacations in the U.S.A. In other words competition for the tourist dollar is keen, and although the trend for the Region has been strongly upward in recent years, only careful attention to matters of importance to tourists - highways, parks and scenic resources, accommodations and the appearance of our communities - will assure the continuation of that trend, assuming normal prosperity.

The forest products industry: Two major factors are shaping the future of the forest products industry today. One is the trend toward sustained yield logging. The other is the trend, fostered by economic pressure and competition, toward "integrated" plants using every scrap of the tree. The second factor favours the large-scale operator with large capital resources. The industry in Greater Victoria, which revolves mainly around one large firm employing 50 percent of the industry's workers and one or two other firms, seems well able to survive under these conditions. Thus, although it is not possible here to predict the future of some of the smaller firms, the industry as a whole looks reasonably stable.*

Shipbuilding: The shipbuilding and ship repair industry depends considerably on government orders and will probably continue to operate in close association with the naval dockyard.

Other industries: Analysis of basic industry in the Region since the war shows that although there have been both gains and losses, there has been a net gain in industrial employment. But while outgoing industries have been diverse in character, incoming industries have been dominated by lumber, which supplied over 90 percent of the total new employment.

It is apparent that ordinary industries in the Region face two serious handicaps in (a) a relatively small and isolated local market for their products (b) transportation costs and time losses in relation to the mainland. Thus new industries can normally be expected only if some of their special needs can be supplied which other areas cannot satisfy.

Agriculture: Agriculture in the Region is in quite a favourable position. By reason of soil and climate it can produce quite a variety of crops. Transportation costs protect it from competition by most imports. The only serious threat comes from within in the shape of urban expansion. So far, more intensive methods have enabled production to rise in spite of this, but the future of agriculture as a whole will be deeply affected by the extent to which this problem is overcome.

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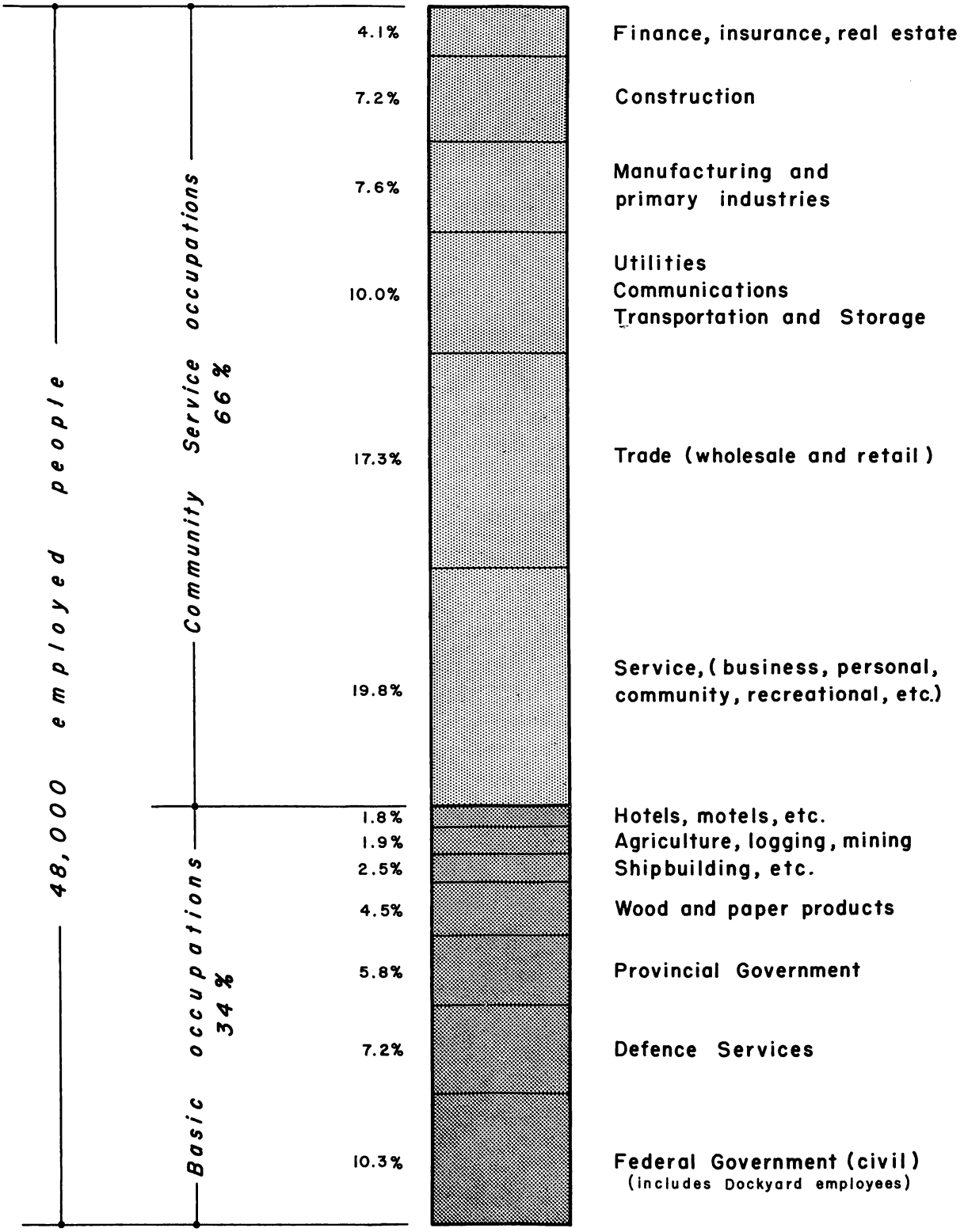
*See also Chapter IV, section 5, "Forests".

EMPLOYMENT IN THE REGION, 1954



This is essentially a rough analysis intended primarily to show the basic occupations on which the growth of the region mainly depends. It is based on 1951 census information.

4. The People Tomorrow:

From 1900 till about 1940 the Capital Region on the average added roughly 15,000 people to its population every ten years. The war and postwar years, however, have quickened the development of the Region in common with the rest of the West, and it seems likely that for some time ahead, population increases will be between 30,000 and 40,000 per decade. In this event the Region's population will be almost doubled in the next twenty-five years.

This spurt in growth will not be shared equally by the municipalities. The central municipalities, Victoria, Oak Bay and Esquimalt, have only a limited amount of space available, so that the bulk of new residential development will take place in Saanich. Thus the first three municipalities are expected to experience steady but moderate growth, whereas Saanich can anticipate even more rapid expansion than it has during the past few years. Central Saanich and the unorganized areas will probably also have an accelerated growth, though not to the same extent as Saanich. The growth of the Region and its municipalities is shown on the diagram on page 12.

IV LAND AND RESOURCES

1. Climate:

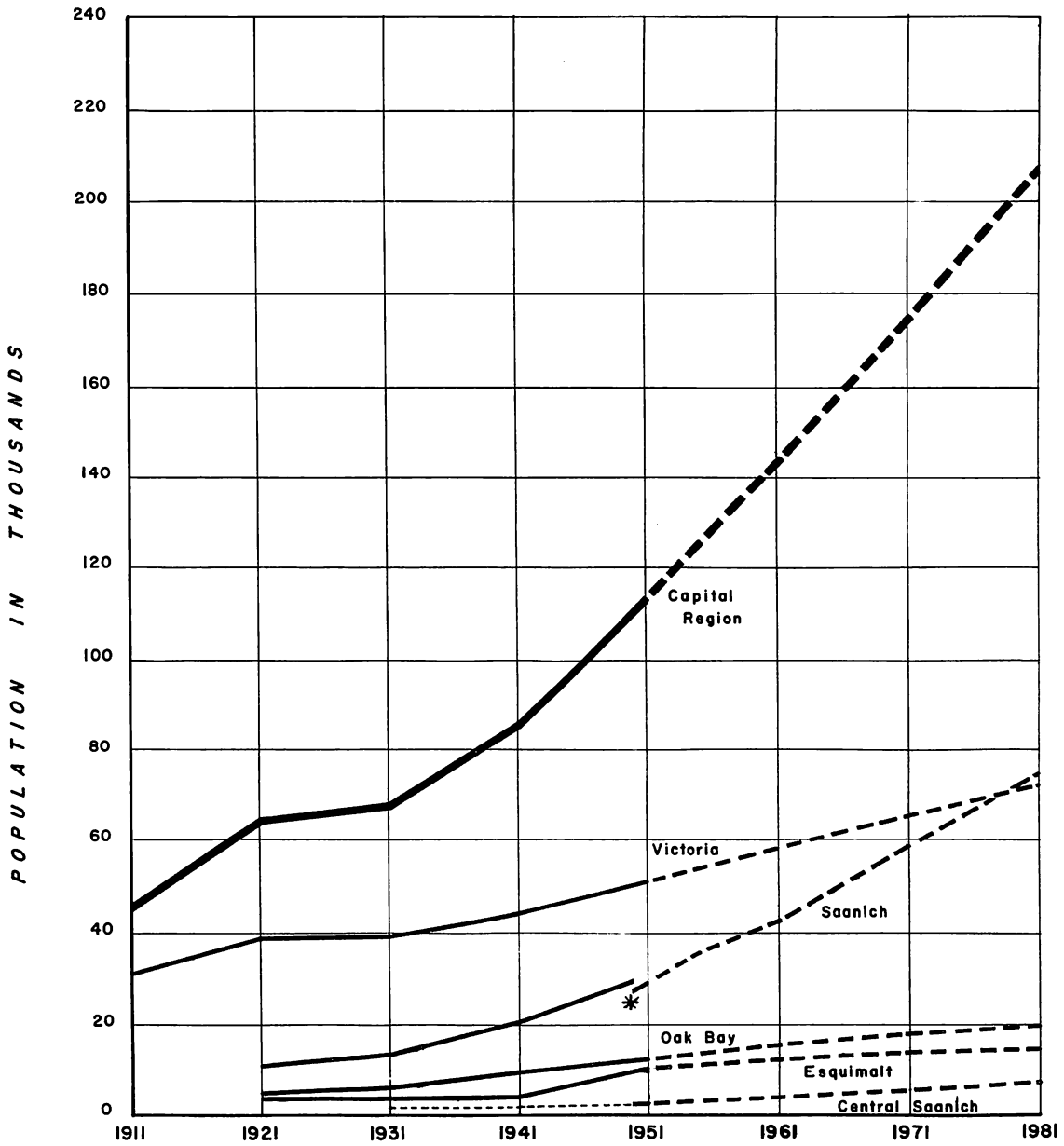
One of the Region's greatest assets is its climate. This is one of the reasons for the high proportion of retired people, for much of the tourist trade, and for the early bulb and flower industry.

The main climatic characteristics of Victoria and the Saanich peninsula are low annual rainfall and a small temperature range. The average yearly rainfall, however, varies considerably from point to point within the region. For instance, Sooke has 45 inches of rain per year, Victoria 27 inches, Patricia Bay 32, and Sidney 30. Rainfall during the summer months is both deficient in amount and unreliable in occurrence for optimum growth of most crops. These two factors - low rainfall and its unreliability - cause the need for irrigation on the peninsula.

The small temperature range - from an average of 39 degrees in January to 60 degrees in July - helps to make the climate unusually mild and liveable. Also notable is Victoria's enviable record of 254 frost-free days per year. (There are, however, only 190 such days at Sooke.) In addition, with over 2,200 hours of sunshine per year, Victoria is one of the sunniest places in Canada.

With reference to flying, Patricia Bay Airport on the average has only 60 hours of dense fog from September to January compared to 90 hours at Vancouver Airport.

THE POPULATION OF THE REGION
PAST, PRESENT & ESTIMATED FUTURE



POPULATION ESTIMATES	*1954*	*1961*	*1971*	*1981*
Capital Region	123,000	143,000	174,000	206,000
Victoria	53,500	58,000	65,000	72,000
Saanich	32,500	42,000	58,000	74,000
Oak Bay	13,100	15,000	17,400	19,200
Esquimalt	10,600	12,100	13,400	14,000
Central Saanich	2,200	3,500	5,000	7,000
Unorganized (incl. Sidney)	11,100	13,000	17,000	23,000

Source: All data up to 1951 taken from census.

Four of the more important aspects of the Region's climate are shown on the diagram on page 14.

2. Land, Its Quality and Use:

The land of the Region is very varied in quality. Much of it, especially in the Highlands District and in the Metchosin area, is mountainous and rocky; some is gravelly, especially in the Langford-Metchosin area; and a considerable amount consists of rock outcrop. The remainder, however, located mainly on the Saanich peninsula, is first-class agricultural land. The location and extent of the various soil types are shown on the diagram on page 16.

Excluding mountainous land, the area of the Region amounts to about 93 square miles, of which about 12 square miles have been swallowed up by urban development. Only half of the rest is under cultivation, mostly on good soil on the Saanich peninsula. Of the undeveloped 40 square miles, only about 10 square miles contain good soils, again mostly on the Saanich peninsula. Details of this breakdown, together with a map showing land development, are shown on the diagram on page 17.

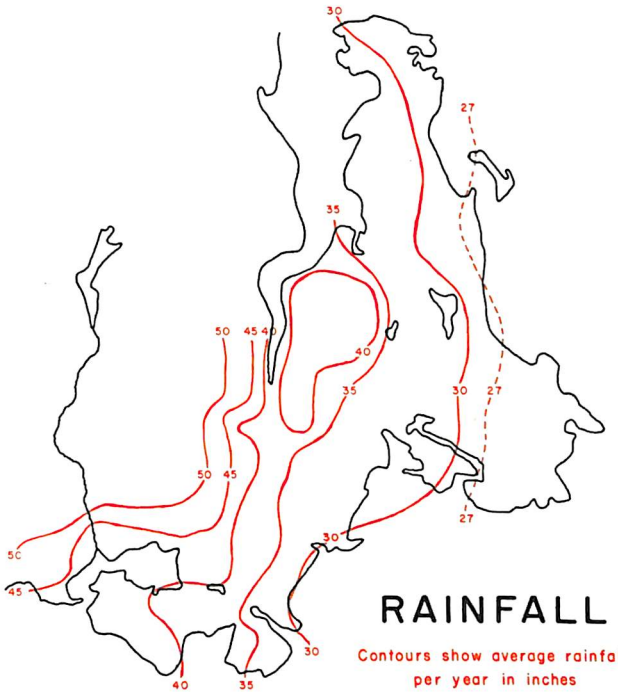
3. Agriculture:

The "big three" in the Region's agriculture are horticulture, dairying and poultry. Horticulture is based primarily on vegetables, small fruit, bulbs and flowers; poultry on the production of eggs.

What trends are apparent in agriculture? The most significant trend is that although land is still being cleared and put into production, the total area of cultivated land is decreasing under the onslaught of subdivision and urban development. This decrease amounted to only 6 percent between 1941 and 1951, but if the accelerated building trend of the last few years continues, this loss could become much more serious. At the same time many of the larger farms have been cut down in size, so that within the same ten years the number of farm holdings has increased by twenty percent. Furthermore, the total agricultural production of all kinds has increased due to more intensive and scientific methods. Thus a strong trend towards the smaller holding has so far taken place without loss of total production.

It is expected that milk production in the Region will decrease, but this will be compensated by an increase in production in other parts of the island. Horticulture and poultry productions are still rising, however. At present the tide is running strongly towards the production of berries, bulbs, flowers and poultry, all of which require relatively small land areas and can be improved by more intensive methods. It is believed that irrigation would accelerate this trend.

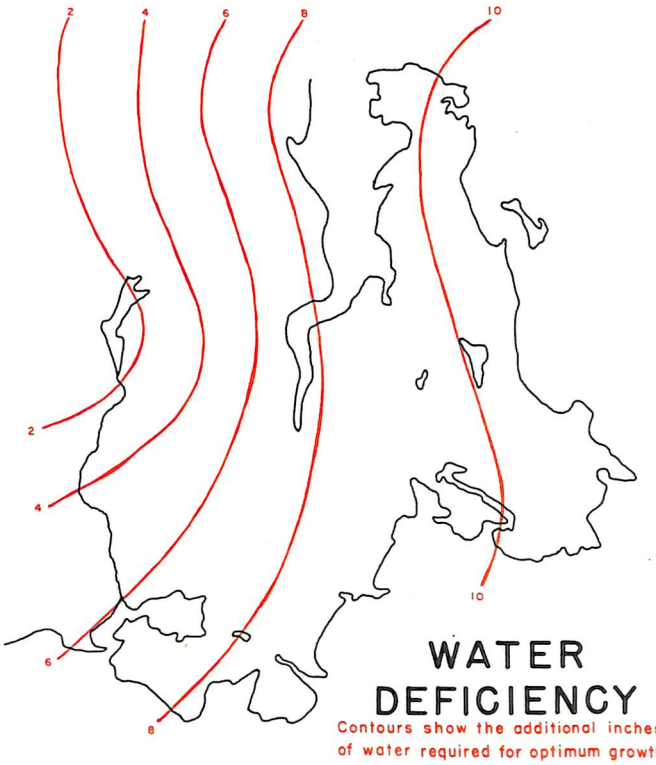
THE CLIMATE OF THE REGION



RAINFALL

Contours show average rainfall per year in inches

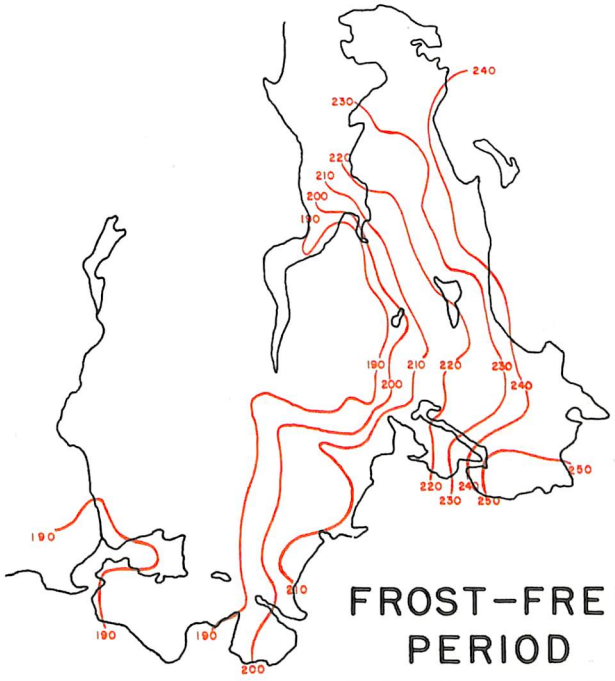
Source: A.L. Farley



WATER DEFICIENCY

Contours show the additional inches of water required for optimum growth of most crops.

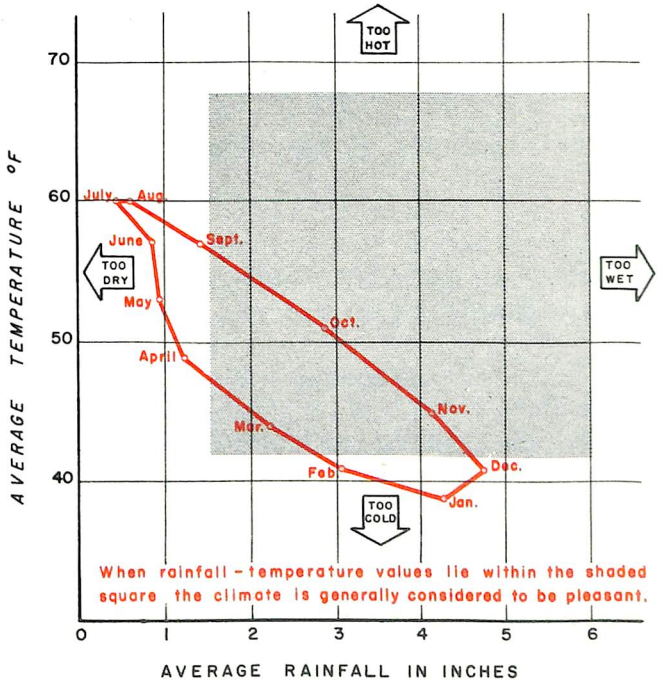
Source: D. Kerr



FROST-FREE PERIOD

Contours show average number of frost-free days per year

Source: A.L. Farley



When rainfall - temperature values lie within the shaded square the climate is generally considered to be pleasant.

CLIMATE

to the man in the street

The seasonal cycle shown is for Victoria.

The contours shown are generalized. Local variations due to mountains and hills have been omitted for clarity.

This diagram shows four of the many aspects of climate in the Capital Region and how they vary from point to point.

Do we produce more than we consume? This is a question which should have a bearing on our land policies. A rough statement of the situation is as follows:

	Total Consumption	
	Local Produce percent	Imports percent
Vegetables	50	50
Potatoes	30	70
Small fruit	165*	0
Eggs	50	50
Tree fruits	10**	90**
Milk	50	50[x]

Agriculture is in both a favourable and an unfavourable position. It has fairly good soils, a good climate (water deficiency excepted) and a captive and growing local market. On the other hand, land costs and taxes make it necessary to operate with as little land as possible and lead to the reduction of farm sizes. But widespread subdivision into building lots tends to inflate land values further, producing a vicious circle. The solution of the problem is not simple, but both producer and consumer would benefit by orderly land development which would prevent unnecessary inflation of land values. This is all the more necessary since, with a steady rise in population, the pressure on land can be expected to increase continually.

4. Land For Recreation:

This section deals only with parks which are large or attractive enough to draw people from all over the Region. Small parks used only by people in their immediate vicinity are strictly a municipal responsibility and are not dealt with here.

Altogether there are a surprising number of parks within about 25 miles of Victoria. On the basis of acreage alone, these parks seem to be adequate for the present population of the Region. However, the fact that some of these are little known or little used suggests either that they do not have a great deal of recreational value or that they have not been adequately developed. Large parks are shown on the diagram on page 20 and listed on page 18.

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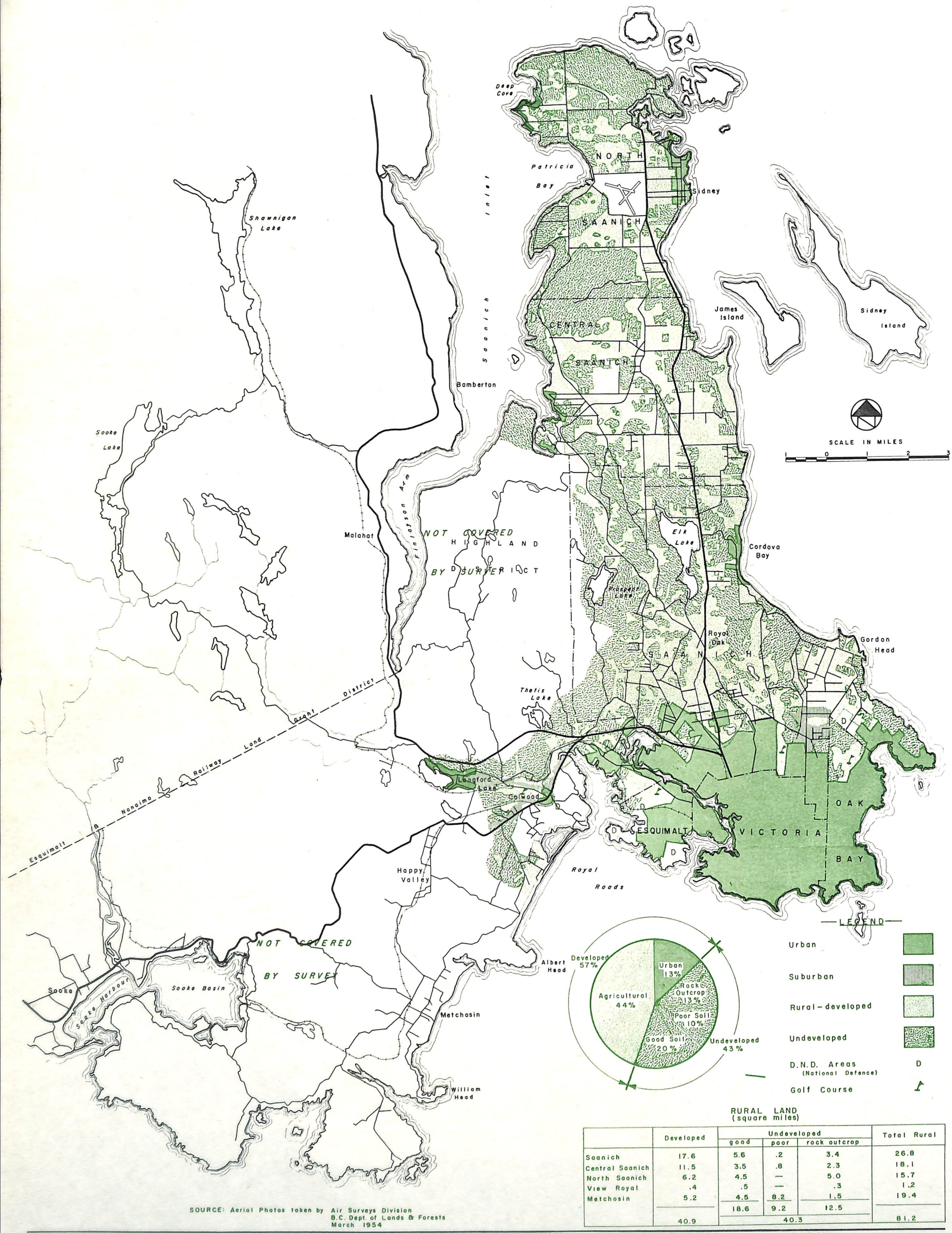
*i.e. the Region supplies its own needs and exports 65 percent more.

**guestimates only.

[x]Mostly from the Duncan and Courtenay areas.

LAND DEVELOPMENT

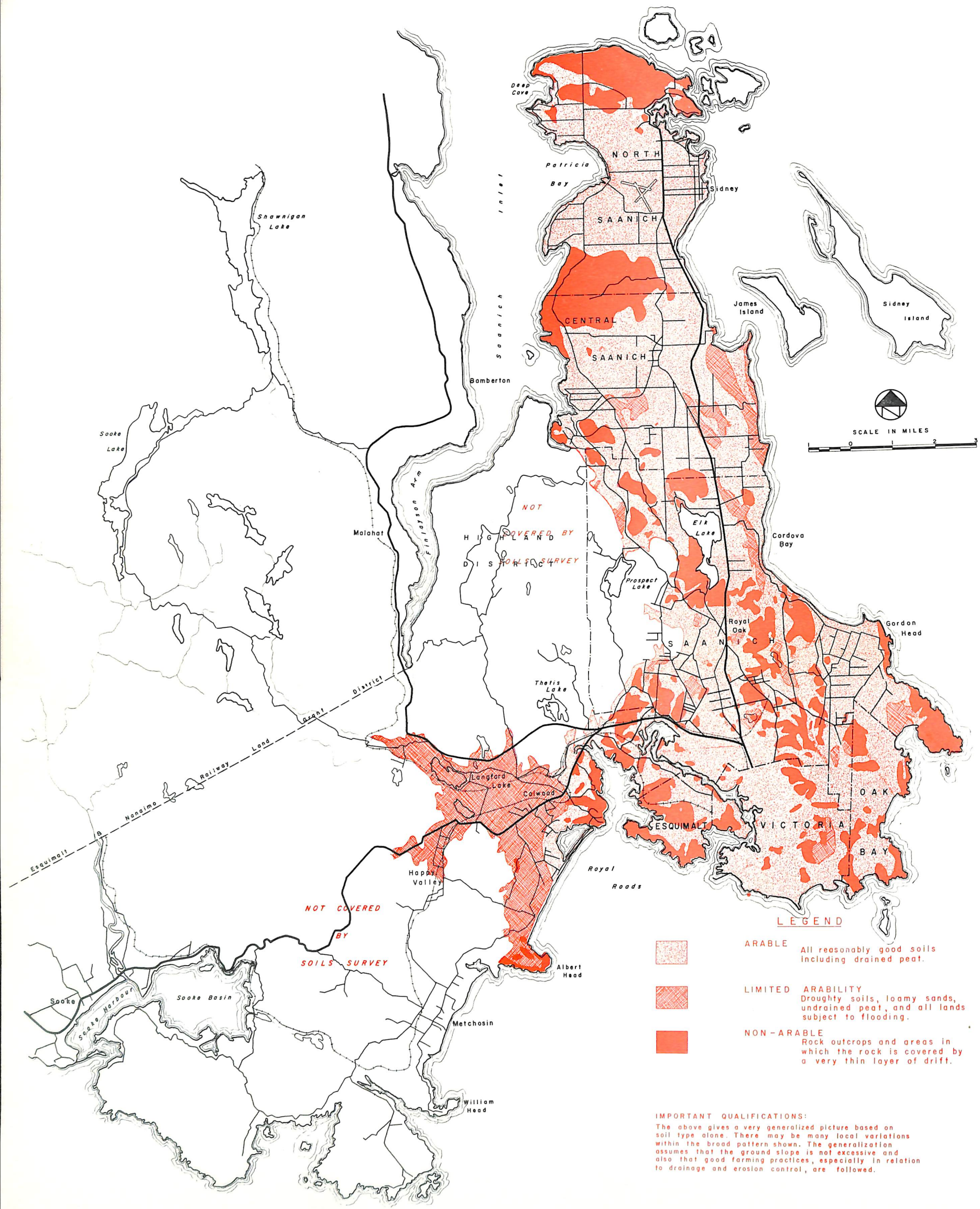


SOURCE: Aerial Photos taken by Air Surveys Division
B.C. Dept. of Lands & Forests
March 1954

RURAL LAND
(square miles)

	Developed	Undeveloped			Total Rural
		good	poor	rock outcrop	
Saanich	17.6	5.6	.2	3.4	26.8
Central Saanich	11.5	3.5	.8	2.3	18.1
North Saanich	6.2	4.5	—	5.0	15.7
View Royal	.4	.5	—	.3	1.2
Metchosin	5.2	4.5	8.2	1.5	19.4
		18.6	9.2	12.5	
	40.9	40.3			81.2

SOILS



LEGEND

ARABLE
All reasonably good soils including drained peat.

LIMITED ARABILITY
Droughty soils, loamy sands, undrained peat, and all lands subject to flooding.

NON-ARABLE
Rock outcrops and areas in which the rock is covered by a very thin layer of drift.

IMPORTANT QUALIFICATIONS:

The above gives a very generalized picture based on soil type alone. There may be many local variations within the broad pattern shown. The generalization assumes that the ground slope is not excessive and also that good farming practices, especially in relation to drainage and erosion control, are followed.

SOURCE: 1944 Soils Survey, R.H. Spilsbury, B.C. Forest Service.

MAJOR PARKS

Municipal Parks

Park	Owner	Acres	Features
Beacon Hill	Victoria	154	Various
Elk Lake	"	446	Lake
Goldstream	"	453	Woods, creek
Mt. Douglas	"	365	View, beach
Thetis Lake	"	1210	Lake, woods
Uplands	Oak Bay	65	View
Willows Beach	" "	-	Beach
Mt. Tolmie	Saanich	65	View
Cordova Bay	"	-	Beach

Provincial Parks (all classes)

Park	Acres	Features
John Dean	98.37	View, picnicking
Sooke Mtn.	1446.00	Forest

Provincial Reserves (undeveloped)

Reserve	Acres	Features
McKenzie Bight	152	Waterfront
South of Thetis	41	View, woods

Mention should also be made of several provincial parks on Saltspring Island, namely Louisa Rock (Fulford Harbour), Mount Maxwell Park (492 acres), Mount Bruce Park (480 acres), and Beaver Point Park (35 acres), in addition to Sidney Spit on Sidney Island.

In general it may be said that the better areas are already in municipal ownership and most of them have been developed to some extent. With the exception of Beacon Hill Park and Mount Douglas Park, however, much more could be done to realize their full potential value. On the other hand it can fairly be said that the provincial government's contribution to the park system of the Region has not so far been comparable with the municipal contribution. The only developed provincial park worthy of mention is John Dean Park. The impressive provincial park total almost disappears if Sooke Mountain Park, which is not believed to have any outstanding recreational value, is discounted. In addition, the provincial reserves do not appear to be particularly valuable.

The two major flaws in the Region's park system are (a) lack of beach parks* (b) lack of properly equipped picnic areas. The first is due to a natural scarcity of good beaches aggravated by a general lack of public vision which has allowed the better beaches to be blocked off from easy access. The second can be remedied only by more aggressive park development. It is not enough merely to set aside lands. They must have access roads, parking areas, play areas and viewpoints and be equipped with picnic tables, fireplaces, water, toilet and garbage disposal facilities. If this is not done they will not be fully used and may, in addition, become points of nuisance, eyesore and fire hazard.

5. Forests:

The Region as defined here is not a suitable unit for the discussion of forest resources, being only the southernmost tip of a large hinterland covered with forests. The picture of forest resources and their use within, say, 40 miles of Victoria, is a complex one. It involves both private and government ownership of land and forest development on several different bases, such as management licences, public working circles, farm woodlots and tree farms. The tree species involved are principally Douglas fir, western hemlock, and to a lesser extent, western red cedar and balsam. Detailed inventories by type, age, and land status are kept by the B.C. Forest Service from whom details can be obtained.**

Apart from the many forest products plants in the Capital Region, much of the resources of the immediate hinterland does not affect the Region directly, being sawn or processed at widely scattered points from Port Renfrew to Duncan. It is not possible to

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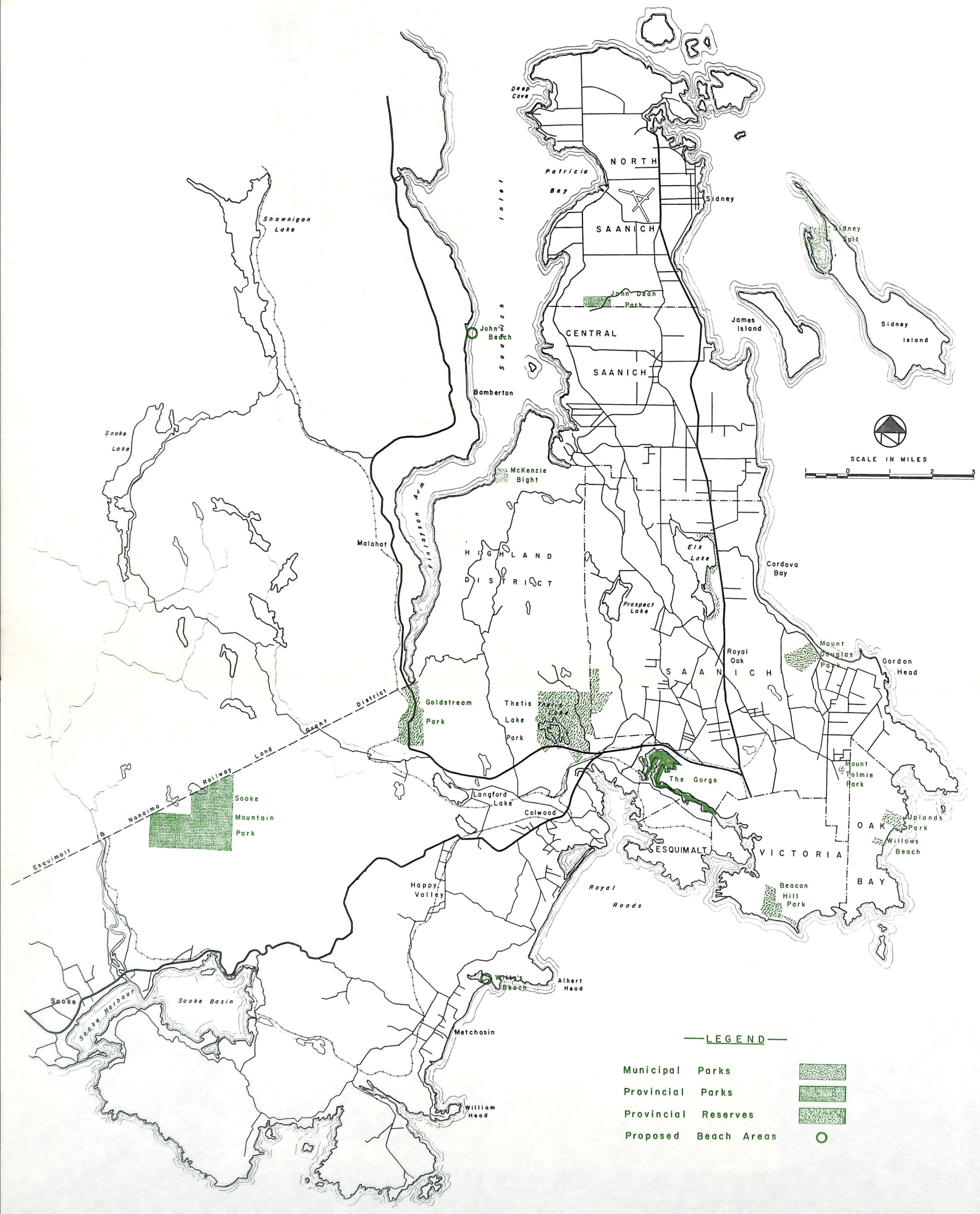
*A beach park is a beach with adequate land behind it for parking, picnic facilities, etc.

**B.C. Forest Service, Parliament Buildings, Victoria, B.C.

MAJOR RECREATION AREAS



THE CAPITAL REGION PLANNING BOARD OF B.C.

say here how further utilization of forest resources will affect the Capital Region, although it appears likely that any major developments will take place outside rather than inside the Region.

6. Minerals:*

During the last century a considerable variety of minerals have been mined in the south end of Vancouver Island. These have included gold, silver, copper and zinc from the Mount Sicker area near Duncan; copper from the Sooke, Jordan River and Cowichan Lake areas; limestone from Cobble Hill and Bamberton; and clay from the Saanich peninsula; in addition to sand, gravel and rock from various sources. In the past the most valuable of their products in terms of production have been cement, sand, gravel and clay products. Today, by far the most important of these is cement, produced in the province's only cement works at Bamberton.**

Although not all of the minerals mentioned exist in quantities sufficient for ordinary commercial production, some interesting possibilities exist. For example, it has been suggested that "black marble" might be found in the Sooke area; that shale from Saltspring Island might be processed to make light-weight aggregate for concrete; and that slag from the former smelters at Crofton and Ladysmith might be used to make "mineral wool". Such developments might make a worthwhile contribution to the economy of the Region.

7. Water Supply:

Bulk water supply in the Region is administered mainly by the Greater Victoria Water District. The District supplies water wholesale to Victoria, Oak Bay and Saanich through its supply mains, these municipalities then supplying their citizens through their own distribution systems. In Esquimalt, however, the distribution system is owned by the City of Victoria which bills its Esquimalt customers direct.

The District obtains its supplies from the Goldstream and Sooke Lake watersheds and delivers them via its Japan Gulch and Humpback reservoirs to the urban area through mains about 38 miles in length. It has been estimated that these two sources, when completely

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*The data for this section were obtained from the Mineralogical Division, B.C. Department of Mines.

**The forthcoming construction of a new cement plant at Popcum in the Fraser Valley has just been announced.

developed, will be capable of supplying the water needs of 250,000 to 300,000 people.* However, full utilization will involve (a) the construction of a 5½ mile tunnel from Sooke Lake to the Japan Gulch reservoir** (b) raising of the dam at Sooke Lake in order to provide more storage. The tunnel is already scheduled for construction by the Water District for 1960-65, and the raising of the dam for 1965-70. These steps will ensure ample water supplies to the greater part of the region for about 40 years.

Looking farther ahead it has been proposed that water should be diverted from Leech River to Sooke Lake, which would again be raised. This step would provide supplies for 450,000 to 500,000 people. For the even more distant future the diversion of the Koksilah River into Sooke Lake has been envisaged, although this would be a very costly step. The Koksilah, however, is a natural supply source for the Cowichan area, which might have a prior claim on it.

These possibilities indicate that no water shortage is foreseeable for the Greater Victoria area, even in the more distant future. In addition, supplies might be available for irrigation, should it be economically feasible.

As far as the Saanich peninsula is concerned, the Saanich municipal distribution system covers only the southern part of the peninsula, so that the northern part is not served by water from the Greater Victoria Water District. Instead it derives water from a number of different sources. The chief of these is the Elk Lake system at present operated by the Department of Transport, which supplies the airport, nearby defence establishments, the Experimental Farm, the area north of the airport, the Brentwood community and several other areas. This system pumps the waters of Elk Lake to reservoirs on the north side of Mount Newton, which feed the supply area by gravity flow. As regards other areas, the Village of Sidney is supplied by springs near Mount Newton; the Cordova Bay community by the Saanich municipal distribution system supplemented by a well; a number of properties by water from the Colquitz River; and many others by individual wells.

In the region west of Esquimalt, the View Royal-Langford area is served by distribution pipes, owned by the Greater Victoria Water District, taken off the Sooke and Goldstream mains; the scattered population of the Metchosin area is similarly served through distribution pipes owned either by the Water District, or by the Federal Government in connection with the Quarantine Station at Williams Head;

*Report to the Minister of Lands and Forests on the Water Supply Situation in and around the City of Victoria, E.A. Cleveland, 1947.

**To replace the ailing 27 mile concrete main from Sooke Lake to Humpback.

the Sooke Harbour community is served from the Water District's concrete flow-line from Sooke Lake to Humpback reservoir; and the neighbouring community of Sassenos is served by a separate water company which takes water from a nearby creek.

These supply systems are shown on the diagram on page 25.

Victoria, Oak Bay and Esquimalt now have systems of water mains effectively covering their whole areas or capable of being extended to do so. They have thus no problems except those resulting from obsolescence or insufficient size as their areas become more densely developed. In the southern part of Saanich, there is no basic problem apart from that of extending the municipal distribution system as the need arises.

The only problem areas are the central and northern parts of the Saanich peninsula and the Metchosin area. In both cases the problem is that of a relatively small, but increasing population which is too scattered to be able to afford long supply mains. This is particularly true of the Metchosin area, which depends largely on the goodwill of the Federal Government for limited use of existing mains. Since this area is within the recognized supply area of the Greater Victoria Water District, the District would be able and willing to serve it if it were economically feasible. Reasonably compact and large-scale development would be necessary to achieve this.

The situation in the Saanich peninsula is fluid at the moment, but not unpromising. The factors involved are (a) the possibility that the Federal Government will relinquish the Elk Lake water system and that it might be taken over by Saanich (b) the possibility of more complete utilization of the extensive water table running along the ridge from Cordova Bay to Saanichton (c) the probability that as urban development creeps further north it will be accompanied by corresponding extension of the municipal distribution system utilizing Sooke and Goldstream water.

(a) Negotiations are now taking place between Victoria, which owns the lake shore lands and water rights, the Federal Government, which constructed and owns and operates the system, and Saanich, the prospective owner, regarding the disposal and use of the Elk Lake system. Previous engineering investigations have stressed that this system is "a natural" for Saanich to own and operate as a separate municipal enterprise.* The system as it is now could serve the domestic needs of up to 10,000 people, depending on the demands of the defence establishments and the Experimental Farm.

.....

*F.C. Stewart, consulting engineer in a report to the Water Commissioner, City of Victoria, 1946, and Dr. E.A. Cleveland in his Report on the Water Supply Situation, 1947.

(b) The presence of an extensive water table from Cordova Bay to Saanichton was indicated by a survey made in 1951 by the B.C. Department of Mines. It was not possible at that time to determine the nature or capacity of the water table, but since it is fed by a comparatively small drainage area over which rainfall is relatively low, its safe annual yield is probably limited. The table is already tapped by a number of wells which will undoubtedly increase in number as time goes on. Further use of the table will, in any case, cause a drop in its level, and might necessitate the deepening of some wells and perhaps the abandonment of others. This would not be serious unless the safe annual yield were to be exceeded, in which case a more general shortage would ensue and surface streams and springs would be affected. It is therefore important for both present and future users that the safe capacity of the table should be determined and control exercised over its use.

(c) Both of these sources may be augmented or superseded in the more distant future by extension to the north of the Saanich municipal distribution system. The Elk Lake system, however, might still have some value for irrigation.

8. Electric Power:

Power in the Capital Region is supplied by the B.C. Electric Company. Almost all of it, however, comes from sources outside the region.

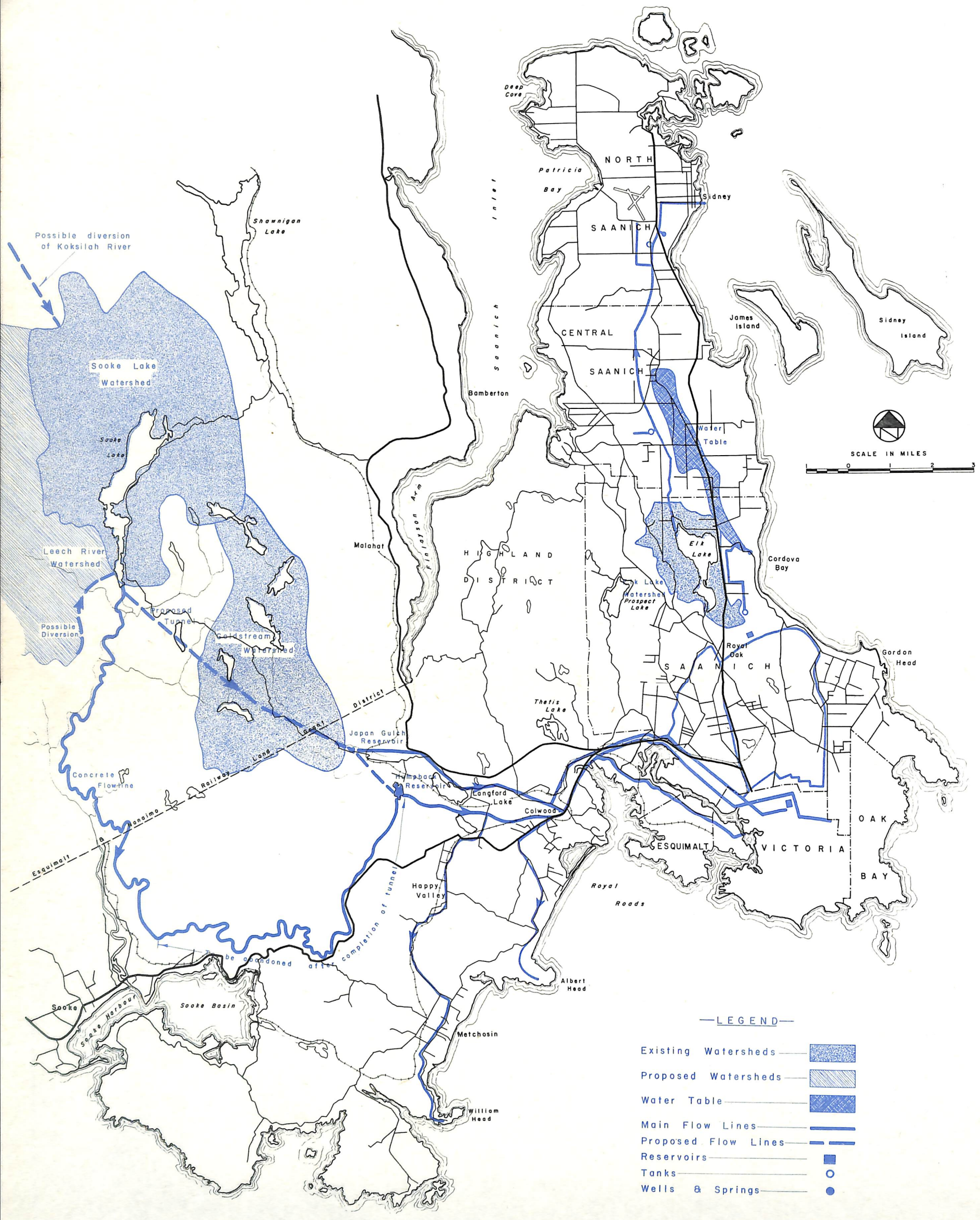
During the last few years the total consumption of power in the Region has been increasing by about 10 percent per year. This has been due not only to the growth of population, but also to a steady increase in the per-capita use of electricity for all purposes.* If these trends were to continue, the total demand for electric power would be doubled by 1961 and trebled by about 1966. Since a continued increase in population is expected and since the per-capita demand for power is constantly rising under the impact of new developments in home equipment and the mechanization of commerce and industry, it seems probable that, for some years at least, the present trend will be substantially maintained.**

.....

*Electricity in the Region is consumed roughly as follows: Residential 39%, industrial 32%, commercial 27%, street lighting 2%.

**Comparable trends for the U.S.A. and Canada, respectively, were recently noted by the president of the Detroit Edison Company and the president of Atomic Energy of Canada, Ltd., as reported in the Journal of Commerce Weekly, Vancouver, B.C. July 3, 1954.

WATER SUPPLIES



THE CAPITAL REGION PLANNING BOARD OF B.C.

The Region's power comes from several sources. The nearest of these are the B.C. Electric Company's hydro plants at Jordan River and Goldstream and steam plant at Brentwood, which between them generate over 41,000 kilowatts.* This supply is augmented by a further 29,000 kilowatts purchased mainly from the B.C. Power Commission, which will be boosted to 40,000 kilowatts from November, 1954. Thus from November the total available will be about 81,000 kilowatts.

Since the peak demand in the 1953-54 winter was 64,000 kilowatts, it appears that the above supply would be adequate only until about 1957. However, the submarine cable to be installed by the B.C. Electric Company between Vancouver Island and the mainland will boost the supply by a further 60,000 kilowatts starting in 1956, which should satisfy the demand until about 1962-1963, depending on the growth of electrical demand.

After that time further demands could be met in two ways (a) by laying additional submarine cables to tap the vast resources of the mainland (b) by drawing more power from sources in the centre and north of Vancouver Island. The extent to which these alternatives will be used will depend on cost factors and the policies and programs of the B.C. Electric Company and the Power Commission.

It is estimated by the Power Commission that about 100,000 kilowatts more will be obtained from the Puntledge and Campbell Rivers. In addition, about 50,000 kilowatts has been listed as the potential of the Somass River system and possibly 60,000 kilowatts from a number of small rivers located mainly in the centre of the island.** Thus the centre of Vancouver Island, which is well within economic transmission distance of the Capital Region, has a nominal hydro power potential of about 200,000 kilowatts.

Looking even farther ahead, over 150,000 kilowatts is listed as the nominal potential of a number of sources in the northern part of the island. The sites involved, however, are all between 200 and 250 miles north of Victoria, so that in order to utilize them economically it would be necessary to transmit their power south for use in the central part of the island, and in turn shunt the power produced at the central sites south to the Greater Victoria area.

It must be emphasized, however, that these potentials are known only approximately, and that the cost of developing some of the smaller central rivers may be uneconomically high. In addition, the claims of other interests, such as fish or recreation, may affect their

.....

*In all cases the installed capacity of the plant is quoted.

**Water Powers of British Columbia, the Water Rights Branch, B.C. Department of Lands.

utilization for power purposes. The above paragraphs are therefore only a listing of potentials as far as they are known without reference to their feasibility. The sources discussed are shown on the diagram on page 28.

If a second 60,000 kilowatt submarine cable were laid and if, say, one half of the Campbell River power and one third of the rest of the island's apparent hydro potential were available to the Capital Region, these reserves would meet the Region's needs for perhaps fifteen to twenty years, even at the present high rate of increase in power demand. Beyond that point it would still be possible to lay additional submarine cables or produce steam power from coal or possibly atomic fuel. The Region is therefore relatively fortunate in its power reserves, and there seems to be no possibility of a real shortage for many years ahead.

V TRANSPORTATION

1. Road Traffic and Facilities:

Apart from Sunday afternoons, when the main rural highways may be temporarily congested, the traffic problems of the Region are confined to the downtown area. But since they affect everyone who visits the city and since they can sometimes be remedied by changes to the highway system far out from the centre, these problems must first be treated as regional rather than local problems.

Traffic and parking problems, the terrible twins of modern cities, are relatively mild as yet in Victoria. Even so they present quite a large and complicated problem, as indicated by the following facts recorded in 1951:*

> On a normal Saturday some 17,000 cars entered the downtown area between 8.30 a.m. and 1.30 p.m.;
>
> At the busiest times, between 3,500 and 4,000 of these required parking space;
>
> Over one million hours were registered at parking meters during the year, and this was only a small proportion of the total parking time in the downtown area.

The major street system of the metropolitan area is shown on the diagram on page 30, together with the principal traffic flows entering the downtown area.

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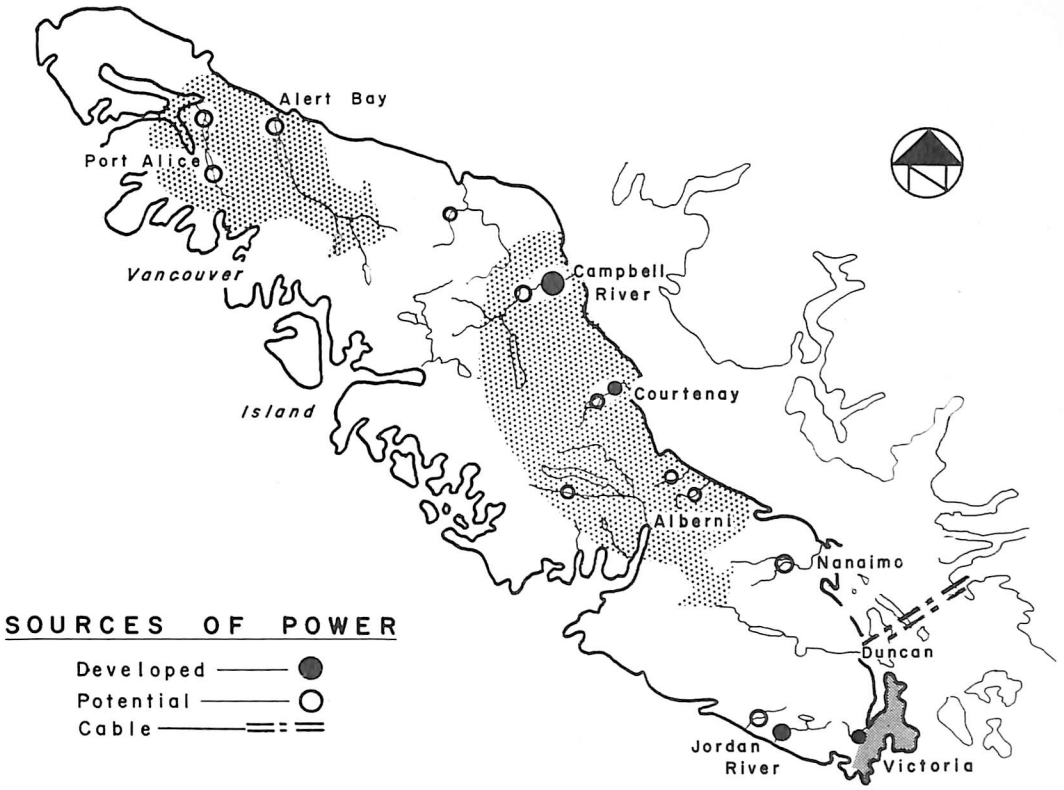
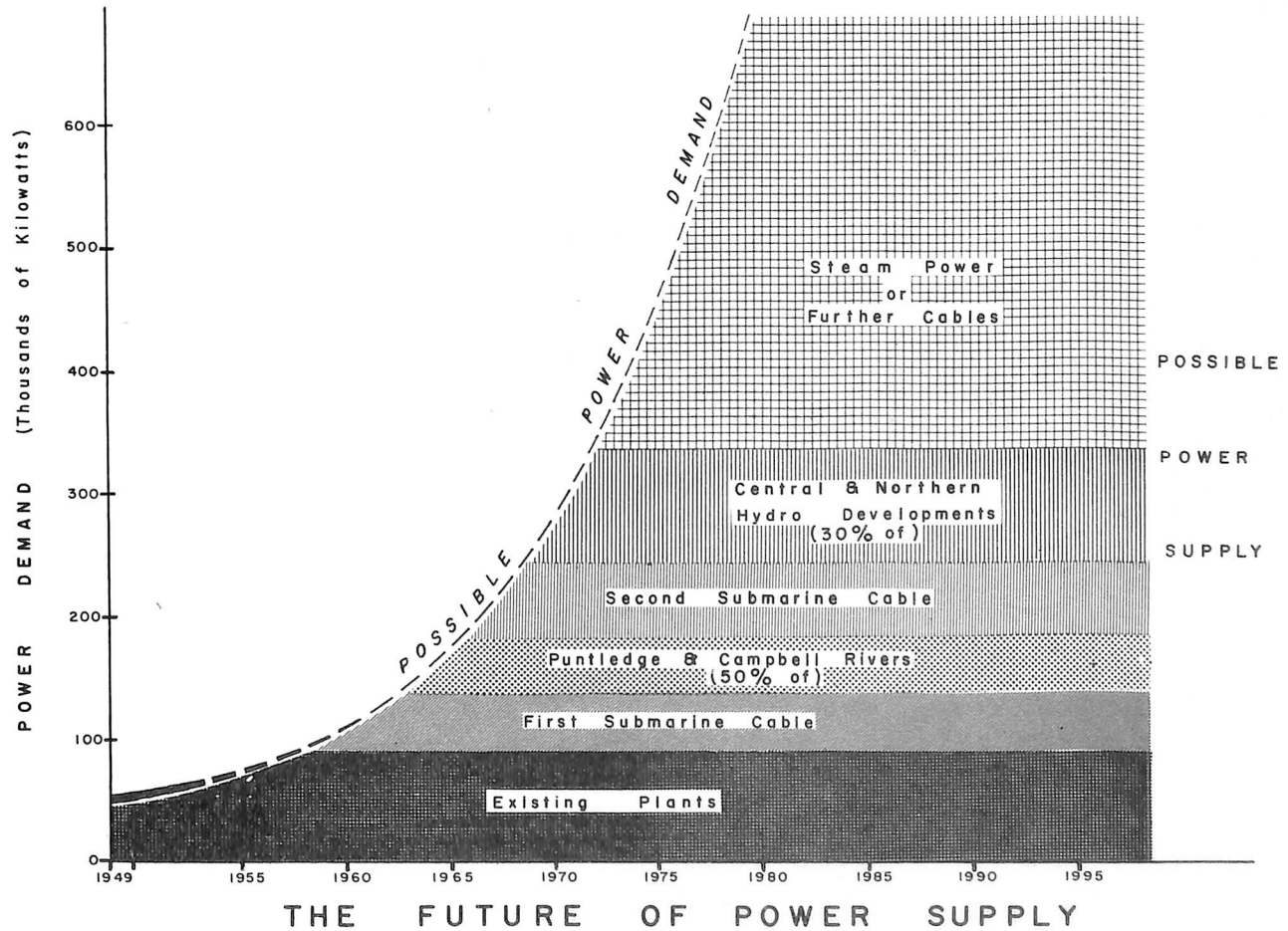
*Report to the City Manager, R.N. Doble, September, 1951.

ELECTRIC POWER





THE FUTURE OF POWER SUPPLY

NOTE: This diagram is necessarily approximate, and, as regards the order of developments, speculative. It applies to the Capital Region only and the qualifications described in the text should be noted.

Traffic is a double problem caused by (a) daytime shopping and commercial activity (b) evening rush hour peaks. The daytime problems are caused by general circulation within the business district and involve traffic control rather than roadway capacity. The evening rush hour problem, however, is one of "through" traffic on one or two main streets only, and is different from the daytime problem in several respects. (1) It involves street capacity in addition to traffic control (2) It is of very short duration (not more than twenty minutes at the peak) (3) It has little economic importance, since most travellers are heading direct for home. These differences demand different approaches, but fortunately, since there is very little "through" traffic during the day and vice versa, the two problems can at least be treated separately.

Like traffic, parking consists of two separate problems - short-term parking, involving shopping and commercial visits, and long-term parking, involving commuters who drive to work. These two problems, however, are inseparable, since they occur at the same time. They also are different in economic importance, short-term parking being all-important for downtown businesses, while long-term parking is not.*

Especially when the public street is used for parking, to the detriment of its traffic capacity, parking and traffic are siamese twins. Any solution for one is only half a solution if it creates a new problem for the other.

Traffic tomorrow:

Traffic in the future will be affected by two major factors (a) the population growth of the Region (b) increase in the ownership and use of automobiles.

(a) Since relatively large population increases are expected, this factor alone will cause increases in traffic.

(b) Car ownership in the Region, already one of the highest in the province, is still increasing, and will again add to traffic flows.

A hint as to the future is already apparent in the fact that the volume of traffic on downtown streets has been increasing by about 10 percent per year. We are warned!

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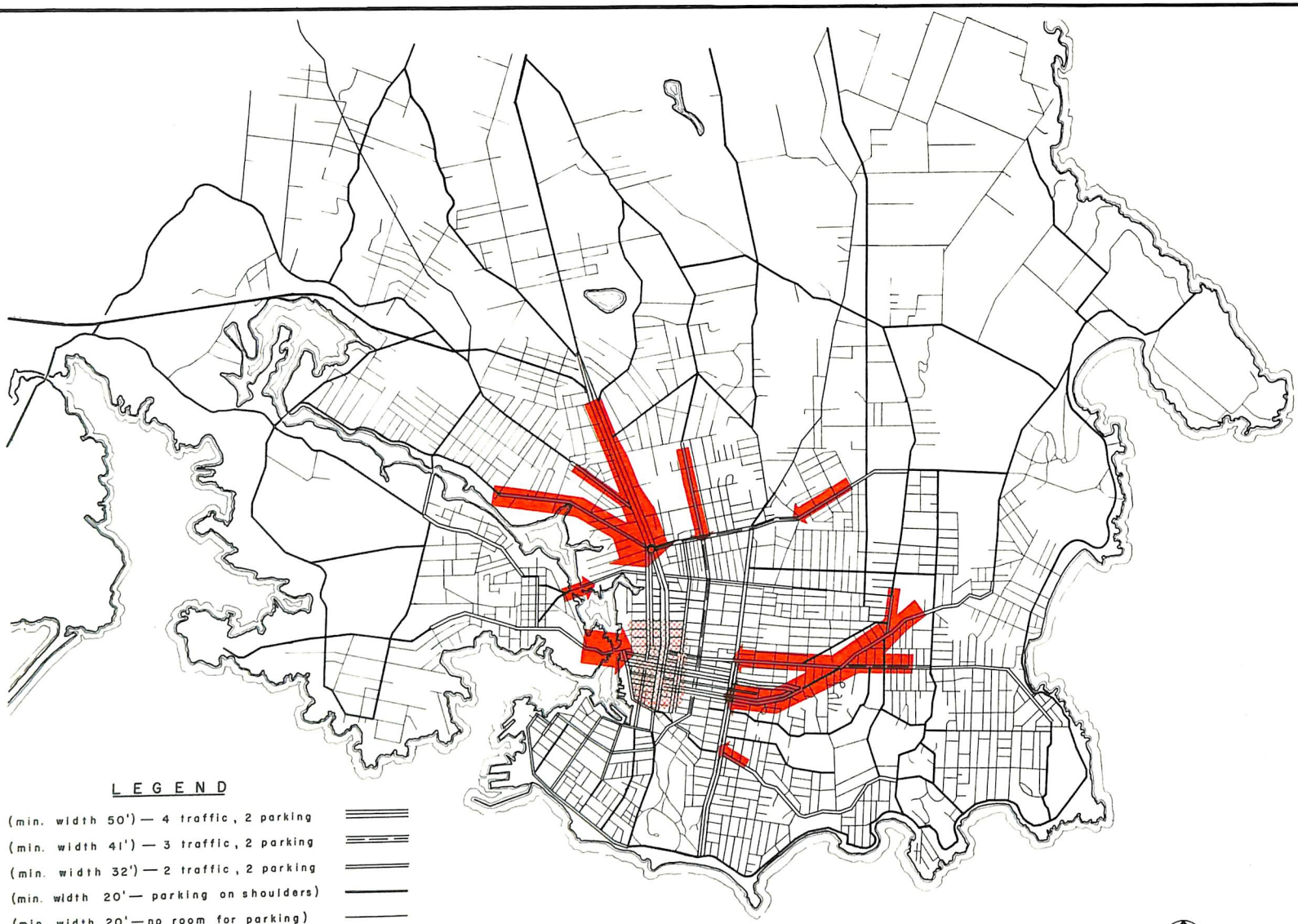
*The U.S. Chamber of Commerce has stated that, depending on the circumstances, one downtown parking space is worth from $10,000 to $65,000 per year to retail business as a whole. This, incidentally, shows the folly of merchants using street parking spaces for their own cars. This is equivalent to throwing away the whale in favour of the sprat.

TRAFFIC AND THE STREET PATTERN



LEGEND

6 Lanes (min. width 50') — 4 traffic, 2 parking

5 Lanes (min. width 41') — 3 traffic, 2 parking

4 Lanes (min. width 32') — 2 traffic, 2 parking

2 Lanes (min. width 20' — parking on shoulders)

2 Lanes (min. width 20' — no room for parking)

Minor roads of varying widths

Traffic Scale:

1,000 vehicles per day

10,000 vehicles per day

Downtown business & commercial area

This diagram shows the major traffic flows entering the downtown area, where traffic problems are concentrated.

SCALE IN FEET

1000 0 1000 2000 3000 4000 5000

Source: City Engineer's Dept. Victoria

THE CAPITAL REGION PLANNING BOARD OF B.C.

2. Harbour Traffic and Facilities:

Traffic in Victoria Harbour is of three main types - deepsea traffic based on the Canadian National docks at Ogden Point, coastal passenger and freight traffic using the Canadian Pacific and Black Ball docks, and general commercial and industrial traffic to and from waterfront industries.

Deepsea traffic, based on the export of lumber and, to a lesser extent, grain, increased from 162 ships in 1948 to 344 ships in 1953.* This increase of over 100 percent has been due largely to the establishment of the new B.C. Forest Products plant in 1951 and the good market for lumber in recent years. Since the outlook for the Region's lumber industry is considered reasonably good, the prospects for deepsea shipping also seem fairly bright.

The main facilities for deepsea traffic consist of the five berths owned and operated by the Canadian National Railway at Ogden Point. These, however, can be amplified by the use of the three former Rithet berths now belonging to the Victoria Machinery Depot. Even allowing for a considerable increase in traffic, the harbour authorities do not anticipate any need for more deepsea berths in the foreseeable future.

Seaborne passenger and local freight traffic out of Victoria is handled mainly by the Canadian Pacific Steamship Company, which operates five berths in the inner harbour. Its passenger loads are subject to so many influences, especially road improvements and air transportation, that its future is quite unpredictable. However, its overall coastal operations, especially those around Vancouver Island and the Gulf Islands, are believed to be strictly marginal and have been losing ground for a number of years. The company has been operating the same number of regular daily sailings into Victoria for many years and again no need is foreseen for any additional docks.

The Black Ball line runs a one-vessel service between Victoria and Port Angeles. Again, no expansion of dock needs is foreseen.

To complete the picture mention should be made of several ferries, principally from Brentwood Bay to Mill Bay, from Swartz Bay to Saltspring Island and from Sidney to Anacortes (Washington State Ferries) and Vancouver (Canadian Pacific Steamships).

The future dock and waterfront needs of industry would entail a separate detailed survey which is not possible here. On account of the importance of waterfront space, especially to the forest industries, such a study should be made in due course.

.....

*Statistics to date suggest that 1954 will be even better than 1953 as regards shipping figures.

3. Air Traffic and Facilities:

Patricia Bay Airport:

The Region's only airport, at Patricia Bay, is owned and operated by the Federal Department of Transport. It lies about 16 miles - 35 minutes driving time - north of Victoria. It is a first class airport with three surfaced runways, each 5000 feet long. In point of passengers carried it ranks fourth in Canada, being outranked only by Toronto, Montreal and Vancouver.*

Air Traffic:

Air traffic from Patricia Bay in 1953 was made up as follows:

Scheduled and chartered flights	28 percent
Local flights**	44 percent
Military flights	28 percent

Scheduled airline flights in effect constitute an airborne bus service between Victoria and Vancouver. In fact, 92 percent of all airline passengers in 1953 were bound for Vancouver - that is, they were not going farther than Vancouver. This traffic varies according to the season, with peak months in July and August and peak days on Fridays, Sundays and public holidays.

Local flights also vary seasonally, with peaks in the summer months, but are concentrated sharply at weekends, and especially Sundays, when trainees put in practice flights. It will be seen that the percentage quoted exaggerates the overall importance of local flying when it is realized that four or five training planes have been known to perform over 120 practice take-offs and landings within six hours on one Sunday, and that one plane alone, rapidly circling the airport, may make fifty of these.

Military use of the field is irregular and unpredictable.

Traffic Trends:

The number of passengers flying from Patricia Bay by scheduled airlines has been doubled in the last seven years. It is estimated that by 1961 this volume will be about two and a half times the 1953 figure, and although it is extremely hazardous to project more than a very few years ahead, a continuation of the same trend would result in traffic in

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*Scheduled Airline Traffic Survey, March, 1953, Air Transport Board, Ottawa.

**Local flights are defined as those in which the landing and take-off on one flight are made from the same field.

1971 being eight times the 1953 figure. What is more significant is that by about 1968 scheduled and charter flights alone would require the full attention of the control tower. Since, however, both local and military flying would also make demands on the tower, it is obvious that there would be control difficulties before that time, possibly by about 1965.

Experience in other places has shown that a mixture of different types of aircraft - fast and slow, with and without radio equipment, and with experienced and novice pilots - not only reduces the capacity and efficiency of the airport, but adds greatly to the risk of flying. Under these circumstances it would be necessary to find a second airfield, probably for the exclusive use of local flying. However, current developments indicate that before this problem arises, regular airline traffic will be handled by helicopters operating in the city area, so that a second airport may not be necessary in the foreseeable future.*

The Advent Of The Helicopter:

Although the helicopter is no stranger to British Columbia, it has not yet been used here for regular transportation of airline passengers.** Nevertheless 40 passenger helicopters capable of cruising speeds between 100 and 130 miles per hour have now been test-flown.

The Victoria-Vancouver run provides a perfect setting for the helicopter.x The spacing of the two cities is well within its economical range; there is a minimum of competition from alternative forms of transportation; and a great saving in travelling time is possible if downtown-to-downtown flights can be organized. At present the air journey takes two hours from centre to centre, but one and one half hours are taken up by limousine journeys at either end. On the other hand the 60 miles journey from centre to centre could be completed in 35 minutes by a helicopter travelling at an average speed of 100 miles per hour. In other words, even allowing for a short limousine ride at either end, a time saving of at least one hour could be achieved.

It appears that the cost of helicopter travel will, in the first place at least, be somewhat higher than conventional air fares, but if allowance is made for the cost of limousine journeys, helicopter

.....

*The future of the helicopter as a private 'plane is quite unpredictable as yet, but one U.S. firm is now producing a "family helicopter" designed for two people. (Financial Post, July 31st, 1954.)

**It is already being used on considerable scale for this purpose in Belgium, England and various cities in the U.S.

xThese remarks apply equally to the Victoria-Seattle run.

fares could be increased 40 percent between Victoria and Vancouver without any addition to the traveller's total cost.

Heliport Requirements:

Relatively little experience is yet available regarding heliports. It seems, however, that a clear area at least 450 feet long and 300 feet wide is necessary.* This will allow for landings and takeoffs, loading, parking (of helicopters), servicing and fuelling, and passenger handling. Fairly clear approaches would be necessary.**

Roof tops would be acceptable, if any large enough could be found, but would require strengthening, and fuelling and fire precautions would present problems. In addition, the noise might be unacceptable in a downtown location, and the parking of travellers' cars would also have to be catered for. In general, a location in an industrial district on the edge of the downtown area might be best, and the harbour area, which offers approaches over water, should be given special scrutiny.

4. Railway Traffic and Facilities:

The two railways operating in the Region are the Canadian National and the Esquimalt and Nanaimo railways. The former is purely a freight line operating principally between Victoria and Cowichan Bay with a connection from Youbou. The latter is a passenger-freight line running as far north as Courtenay with a connection from Port Alberni.

In both cases the lumber industry in the southern part of the island is the traffic mainstay, although the Esquimalt and Nanaimo line also handles freight from the mainland into Victoria. However, a great deal of the lumber is carried to points such as Ladysmith (Esquimalt and Nanaimo) or Cowichan Bay (Canadian National) for transfer to scows or deepsea vessels, and only lumber for the Greater Victoria lumber industries or for direct export from Ogden Point is sent to Victoria.

Since lumber industries in the Region and the logging operations contributing to them seem to have been fairly well stabil-

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*Planning for Urban Heliports, Horonjeff and Lapin, University of California, June 1954.

**The vertical approach angle around heliports will not be as flat as for ordinary airports, but it is clear that the vertical approach popularly associated with the helicopter cannot be relied on in case of engine failure. Single obstructions will not matter greatly provided that the approaches are not obstructed by large buildings.

ized, it does not seem likely that any great increase in haulage to Victoria will take place. On the other hand, it is possible that the Esquimalt and Nanaimo Company's new dock at Nanaimo (to be finished next year) may cut into Victoria's foreign exports. Domestic freight traffic will probably increase with population growth, but this may be offset by increased truck haulage of light and perishable goods between Victoria and Nanaimo. In any event no great change is envisaged in the amount of rail movement in and out of Victoria and no increase in the amount of space required by the two companies in Victoria is foreseen.

Summary:

Looking over transportation as a whole, it is obvious that it presents a dynamic picture and that several significant trends are now in progress. The rapid rise of Nanaimo as the transportation and distribution centre for Vancouver Island, and the improvement of the island highway system make it inevitable that more and more Victoria-bound traffic will pass through Nanaimo. This will apply not only to commercial and some tourist traffic, but also to light and perishable freight which now travels speedily and without any intermediate handling from Vancouver to Victoria by truck. The only kind of traffic not likely to be affected is that involving short-term individual trips, which do not require the use of a car, between Vancouver and Victoria. This traffic, involving governmental business in Victoria or commercial business in Vancouver, is increasingly using the airplane. When the helicopter comes into large-scale operation, the inducement to travel by air will be a great deal stronger. In either event, although it may continue to cater to heavier freight, passengers with a liking for sea travel, and summer tourist traffic, the passenger steamship is apparently being rapidly outmoded by faster alternative methods of travel.

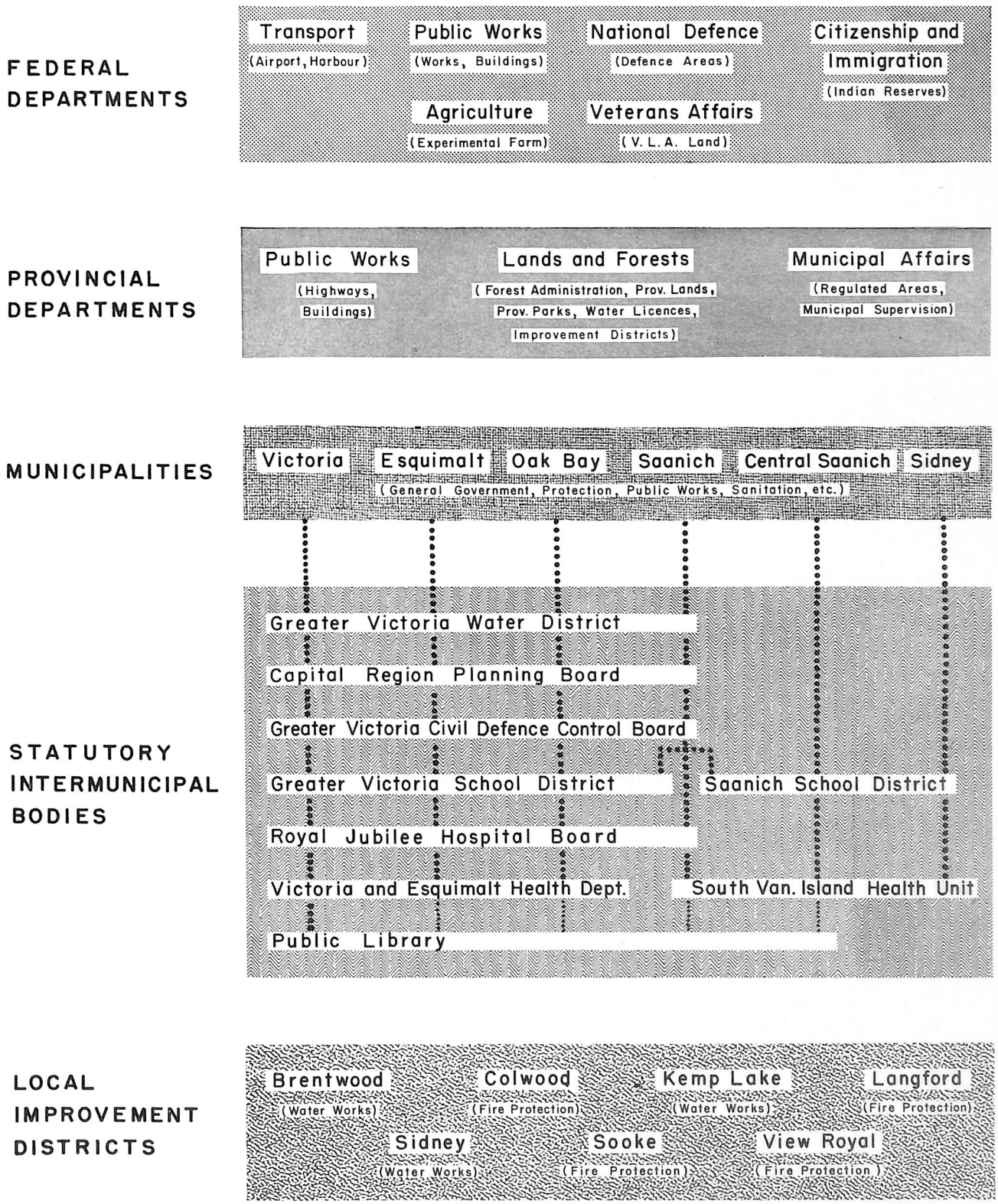
VI ADMINISTRATION

It would be pointless to study problems of development without paying some attention to the administrative bodies which carry out governmental policies and duties. If new policies are adopted it is sometimes necessary to create new bodies or strengthen existing ones for their administration.

The diagram on page 36 shows the main administrative bodies in the Region which deal with development in particular.* There are

*It is difficult to classify administrative bodies in neat categories as there are so many kinds and variations. The list shown therefore cannot be complete. It does, however, show the main bodies and give some idea of the complexity of administration in the Region.

ADMINISTRATIVE BODIES



This is not a complete picture. One major omission is the Sooke School District, which covers unorganized territory only. In addition many intermunicipal administrative arrangements are in effect such as the joint management of Royal Oak Burial Park and joint administration of certain parks by Victoria and Saanich; An electrical inspection agreement between Victoria and Esquimalt; And agreements between Victoria and Oak Bay covering the dog pound, garbage disposal, the use of trunk sewers, fire assistance, police cooperation, etc.

several interesting things about them, namely (1) the large total number of duties and responsibilities carried by the different governments (2) the relatively large number of local improvement districts in unorganized areas. These constitute in effect a rudimentary and restricted form of local government (3) the number of intermunicipal bodies and arrangements. These indicate that in the past the municipalities have tackled common problems one by one, as they occurred, without attempting to establish any one body to deal with them all. A superficial survey seems to suggest that this approach has so far sufficed. The question is whether it will continue to suffice as the urban area grows bigger and its problems more complex.

It has been found in most metropolitan communities that if there are more than a certain number of independent or semi-independent bodies, a new problem of control arises. Who is to ensure that these bodies coordinate their programs without conflict or overlapping? Who is to weigh and control their separate financial demands in accordance with the community's ability to pay? It is not suggested that this point has yet been reached in Greater Victoria, although the number of different responsibilities and duties must impose some strain on members of municipal councils and especially their chief executives. It is a problem, however, which may have to be faced some day.

VII A FORWARD LOOK

What problems can the Capital Region foresee for its development?

1. The Urban Octopus:

The One Great Problem which faces the Capital Region is that of controlling residential development. The urgency of this need is apparent from the diagram on page 38, which shows part of the Greater Victoria "fringe". This area contains about 1200 lots of less than half an acre, that is, mainly residential lots. The total area of the lots plus access roads is only 250 acres. Nevertheless <u>they have been scattered wantonly over about 2500 acres - ten times their own area</u>. At the same time, <u>only one quarter of them are occupied</u>, most of the rest lying idle waiting for buyers. What are the consequences of this kind of development?

(a) The length of road, ditch and water main which the municipality has to maintain is much greater than it need be;

(b) Sanitation problems may arise and sewers may become necessary before there are enough people to pay for them;

(c) Schools have to serve large areas, so that pupils have to walk long distances or be transported to school. In

THE LAND GOES TO TOWN

Topsy would have felt at home in this Capital Region fringe area, where suburban sprawl is already in progress. No community can afford this. Neither can the Capital Region as a whole.

The areas shown here have been subdivided into lots of less than half an acre. *Only one quarter of these lots are actually built on.*

SCALE IN FEET

1000 0 1000 2000 3000 4000 5000

the same way, only small, inadequate and non-competitive stores can be supported within reasonable distance for the housewife;

(d) The area as a whole will not be able to support a convenient and frequent bus service until an economic density has been reached.

(e) Since development is spotty and unpredictable, both in location and in quality, building loans will be difficult to obtain;

(f) Haphazard development is considered detrimental by the underwriters of municipal bonds and the municipality will probably have to pay higher interest rates on its borrowings;

(g) It inflates land values and tax valuations over a whole area and raises farmers' and smallholders' costs unnecessarily;

(h) Its initial promise of rural conditions and low taxes is temporary only. Rural becomes suburban and then urban as the residential wave rolls on. Wells give way to water mains, septic tanks to sewers, rural taxes to suburban taxes, and the town again catches up with its fugitives;

(i) It destroys the rural character of large areas. This is specially serious in the Capital Region with its limited area. <u>If the present indiscriminate pattern continues, the whole of the Region, excluding only mountainous and rock outcrop areas, will be covered by this suburban rash in twenty years</u>. With its natural beauty spoiled, the Region would have little recreational value, and with land values inflated agriculture would be a hazardous business.

This is the case against urban sprawl. It is short sighted, socially inadequate and costly to the residents individually and to the municipality as a whole. It is the way to bankruptcy or the suburban slum. In any situation it is foolish and lamentable; in the Capital Region it would be disastrous. The Region cannot afford a binge on the fringe. There just isn't enough fringe.

This is <u>not</u> an argument against residential expansion, which is inevitable, or against true rural living - that is, living on a piece of land which is big enough to provide a true rural atmosphere and to make urban services unnecessary - which has its place. It <u>is</u> an argument for sanity in the use of limited land resources and for the development of satisfactory communities as a matter of municipal policy - true communities with social and economic advantages. It

is a plea for collective self-regulation as against anarchy in the development of the Region.*

The main responsibility for shaping future communities will inevitably fall on Saanich, Central Saanich, Sidney, and the unorganized areas to the north and west. It will necessitate (a) zoning plans and regulations, scientifically prepared and strictly administered, which will guide development into the most suitable and economic areas (b) planning of public works, services and schools in accordance with these plans so that when new areas are opened up they will be well and economically serviced.

The necessity for planning and control is all the greater in these areas because the chances of obtaining new industries to share the tax load do not seem very bright, so that residential and commercial properties will have to carry practically the whole burden.

2. Pattern For The Future:

Is it possible to recommend any pattern which the development of the Region should follow in the future?

There are several factors which should guide future development (1) soil quality (2) land subdivision (3) main roads and water supplies.

(1) In general poor soil areas should be sought for development to save really productive land. Rock outcrop areas, or areas where rock is very near the surface, often do not permit satisfactory use of septic tanks and involve extra expense in the installation of water mains and sewers for both the owner and the municipality. Development should be permitted only if the Medical Health Officer is satisfied with the arrangements made for sewage disposal.

On this basis the Cordova Bay, Saanichton and Langford-Metchosin areas would ideally be most suitable for development.

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*The economic importance of community development is seldom realized. For example, the four Greater Victoria municipalities now spend a total of about <u>one million dollars every year</u> on public works alone, while their citizens have recently been building homes assessed at <u>fourteen million dollars every year</u>. Obviously small percentage savings in these figures amount to very large sums of money in total.

(2) The nuclei of several communities already exist in the Region and, in addition, a substantial amount of subdivision has taken place either around them or in other areas. For example, apart from communities at Sidney, Cordova Bay, Brentwood, View Royal and Langford, there are considerable areas of subdivision near Deep Cove and Cole Bay. The development of larger communities could very well take place around any of these areas.

(3) New highways, principally the new Island Highway and the Patricia Bay Highway, will naturally make their surroundings more accessible from the city and encourage development there. This would tend to favour the Cordova Bay area and the View Royal-Langford-Metchosin areas. The existence of water mains in these areas will also make for economic development.

The value of mountainous and rock outcrop areas as natural forest greenbelts should also be mentioned, especially for limiting or interrupting urban sprawl. In such areas control of residential development by suitable zoning, purchase of some lands as wilderness and the development of others as parks could make an extensive domain for the permanent enjoyment of the growing population.

One last factor worthy of mention is the proper control and use of areas subject to flooding, of which there are quite a number, especially in Saanich. Residential development should not be allowed in such areas unless they are adequately drained, as they attract low-value homes which cannot afford the sewers which soon become necessary. Some of them, however, could be reclaimed by the "sanitary fill" method of garbage disposal, which is in widespread use across the continent. Many low-cost sites for industrial use, parks or other public purposes have been obtained by this method.

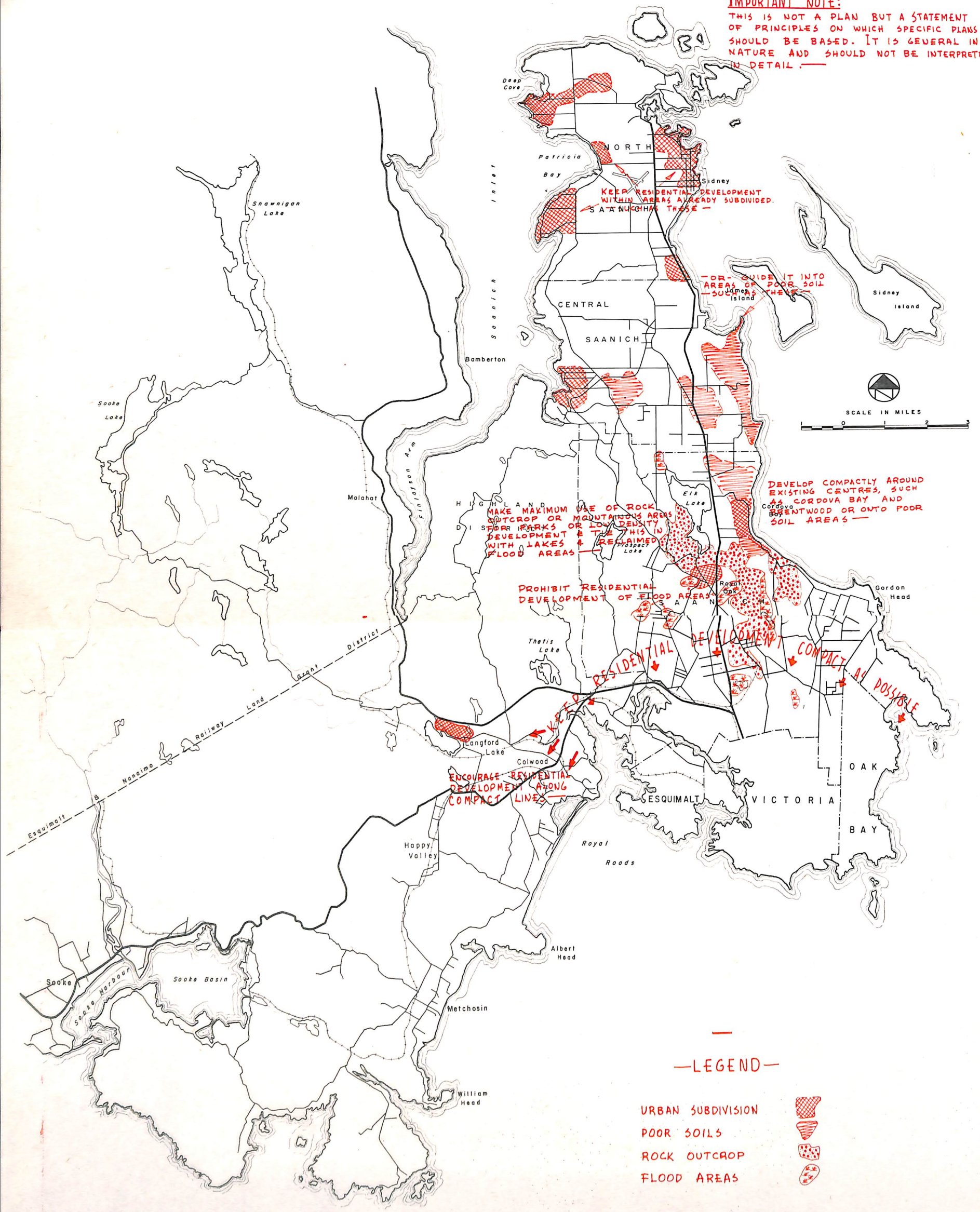
These various factors and how they might affect the development of the Region are shown on the diagram on page 42.

3. Subdivision:

Another vital aspect of development is the actual subdivision of land. Subdivision can produce good building sites or bad; high land values or low; an efficient street pattern or a chaos of jogs and blind alleys; a pleasing landscape or an irritating monotony of streets and houses. To a community subdivision is what cut is to a coat; to the subdivider it means money; to the builder it may mean the difference between a loan and none. Yet a great deal of poor subdivision has been done in the past and is still going on, often because land is already cut up into rather small lots belonging to many different owners, but more often because owners know nothing about subdivision.

DEVELOPMENT PRINCIPLES

IMPORTANT NOTE:
THIS IS NOT A PLAN BUT A STATEMENT OF PRINCIPLES ON WHICH SPECIFIC PLANS SHOULD BE BASED. IT IS GEUERAL IN NATURE AND SHOULD NOT BE INTERPRETED IN DETAIL.



Some examples of poor subdivision in the Region and what they might have been are shown on the diagram on page 45.

Several remedies are available (1) the use of men trained and experienced in land layout (2) cooperation between adjoining owners to produce larger parcels which lend themselves to better subdivision (3) the use by municipalities of Part II of the Town Planning Act (replotting) where many owners are involved* (4) firm control by municipalities by means of subdivision control by-laws. The use of competent advice is one of the most important of these and is one in which the Planning Board's staff could give assistance to subdividers.

4. Heliports:

The advent of the helicopter has already been discussed. The question remains of arranging for the acquisition and development of a suitable heliport site or sites.

It is recommended that the Planning Board, in collaboration with the Department of Transport, should survey the Greater Victoria area for suitable heliport sites. These sites should be at least 5 acres in area and should be considered carefully in relation to (a) clear approach paths (b) good access roads (c) the protection of surrounding areas from noise. Representations should then be made to the Minister of Transport regarding the acquisition and development of these sites.

5. Industrial Survey:

The Victoria Chamber of Commerce is unceasing in its efforts to attract new industries to Greater Victoria, but so far these efforts have followed the usual patter of general advertising. It is believed that now, especially with the advent of the Planning Board's staff, a more selective approach could profitably be taken, along the following lines: (a) survey and catalogue in detail the total natural resources and industrial products and by-products of the Capital Region (b) seek the advice of the B.C. Research Council on possible wider uses for these resources (c) organize a more concentrated and selective drive for the kind of industry which might be attracted by these assets (d) survey existing and potential industrial sites within the Region and set aside suitable industrial zones.

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*This section empowers Councils to pool, resubdivide and reallocate land where petitioned by the owners of three-fifths of the parcels concerned provided they hold at least fifty percent of the total assessed value.

It is recommended that the Capital Region Planning Board collaborate with the Victoria Chamber of Commerce in such a program, and that the assistance of other agencies such as the B.C. Department of Trade and Industry should also be sought.

6. Water Supply:

In view of the general scarcity of water in the upper Saanich peninsula and the importance of existing supplies to present users, it is desirable that further investigations be made into the water table running from Cordova Bay to Saanichton. It is therefore recommended that the Capital Region Planning Board, with the endorsement of the municipal councils of Saanich and Central Saanich, request the Minister of Lands, through the Comptroller of Water Rights, to make further investigations into the nature and extent of the Cordova Bay - Saanichton water table; to take such regulatory action as may be necessary to protect it from over-use; and to investigate its possible usefulness for irrigation.

It may be noted that this suggestion is much more likely to be accepted by the Minister if the property-owners in the area concerned would undertake to keep records of their own wells in collaboration with Department officials.

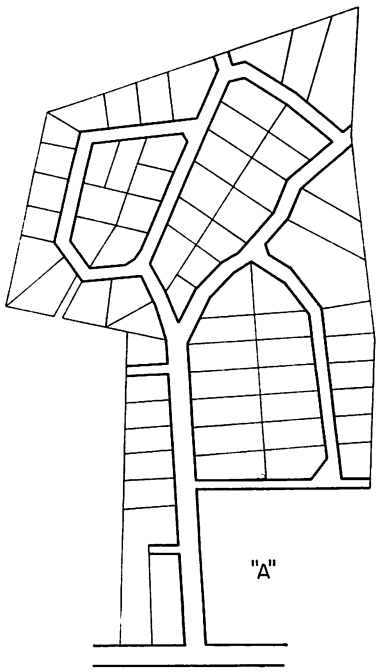
7. Major Parks:

The Region's system of major parks has two major faults (1) lack of beach-parks (2) inadequate facilities, especially for picnics and outings.

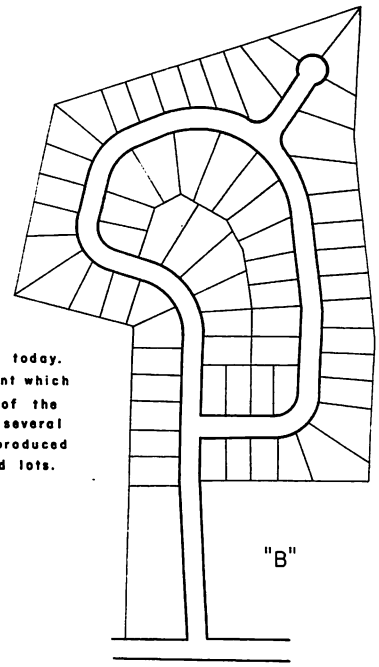
The best hope for beach parks of any size now lies in relatively undeveloped areas outside the Saanich peninsula, that is, in unorganized territory. Witty's Beach and John's Beach (Bamberton) are believed to be specially worthy of development and there may be others beyond Sooke. In case a West Coast road soon becomes a reality and the adjacent land is opened up, it is essential that area such as the Sooke-Renfrew district should be investigated and reserves placed on promising beaches.

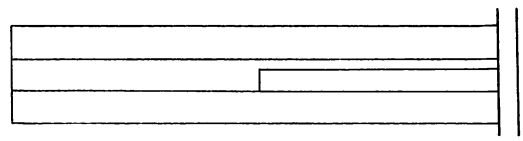
In these areas the responsibility for both survey and development belongs to the provincial government. The Parks and Recreation Division of the B.C. Forest Service has done sterling work in developing parks such as Mount Seymour and Cultus Lake in the Lower Mainland and other well-known parks in the interior of the province. Apart from John Dean Park, this Division has done nothing of any consequence in the Capital Region, and certainly has not contributed to the Region's

LAND UNDER THE KNIFE

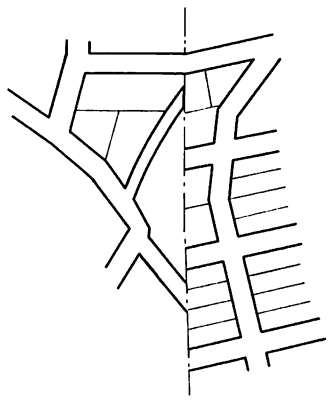


"A" is an actual subdivision today.
"B" is a possible arrangement which would have saved 25% of the road length, eliminated several nasty intersections, and produced larger and better shaped lots.

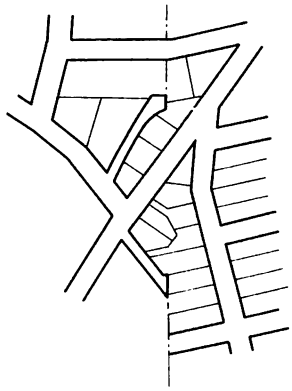


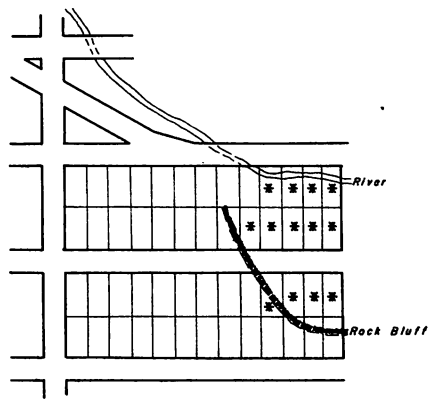


Three actual parcels whose original length was 15 times the width. The middle owner, in order to subdivide, had to provide an access lane 750 feet long.



The two original landowners on either side of the line had subdivided without any thought for each other or for the road system in general.
The grotesque result is shown above.
Below is the arrangement made to salvage the wreck.





The above area was subdivided "on paper" with no regard for physical features with the result that the lots marked * have no real access, being cut off by the rock bluff or by the river.

NOTE:
These unfortunate subdivisions, actual cases found in the Capital Region, were not the work of the Marx Brothers but of sane people. A little expert help would have earned them much more money and saved the community and the individual a costly street pattern.

SCALE IN FEET

100 0 200 400 600 800

park development in proportion to its population.* It is therefore recommended that the Capital Region Planning Board request the Minister of Lands and Forests to survey and reserve suitable beach and park areas in and around the Capital Region and to authorize their development on a scale commensurate with the recreation needs of the Region.

The municipalities can contribute by developing small beaches in their own areas, but this should be done selectively. Instead of providing accesses to the waterfront every 600 feet it might be more satisfactory to pinpoint the better and more accessible spots and provide good access roads with adequate parking space. These would be easier to maintain and police than a larger number of small scattered areas.

In connection with parks, the perennial question "What can we do with the Gorge?" is worth a brief comment. The land-locked Gorge waterway, which was once the city's bathing area, is now heavily polluted and girded in many places by mud flats. What was once an asset has now become almost a liability. The sewerage system now being constructed in Saanich will do much to alleviate pollution, but the major source of pollution, Victoria Harbour, remains. This problem has already received considerable study from the engineering aspect, resulting in proposals to construct a canal between Esquimalt Harbour and Portage Inlet, together with a dam at the Narrows.** This would flush out the waterway at every tide with seawater from Esquimalt Harbour, while at the same time preventing the influx of pollution from Victoria Harbour. Locks in the dam, and possibly also the canal, would allow small boats to enter the waterway. The cost in 1950 was estimated at over 800,000 dollars. This matter is now being considered by the Gorge Waterways and Park Improvement Association.

Little consideration seems to have been given, however, to the question of land development along the waterway. If the waterway were cleaned up, how could it best be utilized by the general public as distinct from adjacent property owners? Can existing park areas be complemented to form a chain of parks and give the maximum amount of public waterfront? Can good accesses and adequate parking areas be provided? Answers to these questions could make all the difference between a mere million dollar clean-up scheme and a "million dollar" public recreation area. Obviously the land development, public health

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*On a comparative basis the Provincial Government has spent over $1,000,000 on parks in the Lower Mainland from 1950 to 1953, but only $7,000 in the Capital Region in that time. The population of the Lower Mainland is about six times that of the Capital Region.

**Proposed Canal from Thetis Cove to Portage Inlet, Water Rights Branch, B.C. Department of Lands, 1950.

and engineering aspects must go hand in hand and in further studies the Planning Board and its staff should provide the necessary land studies in addition to playing a coordinating role.

Two other areas which deserve specific mention are Thetis Lake and Goldstream, both of which are owned by the City of Victoria, though outside the city area. Goldstream might make an excellent roadside campsite, such sites being very scarce in the Region despite their attractiveness for some tourists. Thetis Lake, already very popular in summertime despite inadequate development, merits special attention as one of the very few suitable warm-water areas in a region girded by cold water. In particular adequate parking space, toilet facilities, dressing rooms, picnic tables and trails must be provided if the area is not to lose much of its value as a result of uncontrolled use.

The Parks and Recreation Division of the B.C. Forest Service is better equipped to plan, develop and maintain large areas of this type than any municipality. Also its general policy would allow it to develop these two areas, since both are in unorganized territory. It is therefore recommended that the City of Victoria investigate possible arrangements for developing Thetis Lake and Goldstream parks, bearing in mind the greater facilities of the Parks and Recreation Division of the B.C. Forest Service, but with due regard for its own equity in these areas.*

For the proper development and equipment of municipal parks, a more intensive park program will be necessary. This is not only a question of finance, but of administration, especially in the case of parks such as Elk Lake, which is owned by Victoria but located in Saanich, and the Gorge area. Such parks are or will be used by people from all over the Region. How can their development be shared by all the municipalities? The Victoria-Saanich Beaches and Parks Committee is a step in the right direction but (a) it embraces only two municipalities (b) it is merely an arrangement of convenience rather than an attempt to administer the parks of the two municipalities as a whole system. A Greater Victoria Parks Board suggests itself as the obvious solution, but it has the drawback, at least in principle, of creating yet another autonomous intermunicipal body.

One idea worthy of consideration meantime would be the formation of a Regional Park Promotion Committee, consisting of lay men and women interested in the development of parks and the preservation of natural beauty spots.** Such a group would have no official duties or responsibilities but would endeavour to keep before the public and

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*Elk Lake is another warm-water asset of great potential, but presumably its location in municipal territory would debar it from development by the Provincial Government.

**It is not proposed that such a Committee should be formed by the municipalities as such. It must be formed spontaneously, if at all, by citizens with a genuine interest in parks.

the municipal councils the need for park development. Since parks are often regarded as unessential and relegated to a very low priority on municipal budgets and since land is usually appraised primarily in terms of its market value, such a group could do a great deal to preserve the beauty and amenity of the Region for recreational enjoyment.

8. Administrative Problems:

It is not apparent that there are any inter-municipal problems - with the exception of the development of metropolitan parks - which are not being adequately dealt with now by some intermunicipal body or agreement. In fact, the number of such arrangements which appear to be working satisfactorily is quite remarkable. However, such problems are likely to increase in number and complexity as the urban area grows.

In the meantime there are two bodies which could well play an important part in inter-municipal matters. The first is the Capital Region Planning Board, which is purely advisory but has the advantage of having a professional staff available for factual study of problems. It could effectively act as a meeting ground for the discussion and study of common problems. The second is the Greater Victoria Water Board, which is an administrative body. It might be possible to broaden the scope and powers of this Board to include, say, metropolitan parks or any other agreed duty. In this event, one representative board could handle all intermunicipal tasks without any overlapping or confusion, having separate departments for its various functions.

9. Traffic and Parking:

There are many instances in the Region's major street system of jogs and bottlenecks; of dangerous and inefficient intersections; and of lack of linkage and continuity in the main network (for example, there is no continuous east-west artery across the south part of Saanich). These indicate that a long-term plan for major streets is needed. A plan is the only means by which widening can be achieved without cost as buildings are demolished or altered, and by which land can be purchased in strategic places and at strategic moments.

No smart or facile answers can be given to street and traffic problems. They must be studied in conjunction with the land developments which give rise to traffic. They are therefore a very important part of the Planning Board's program, to be carried out in close cooperation with the municipal engineers and the B.C. Department of Public Works.

Downtown traffic and parking problems are caused by traffic originating in all parts of the Region and cannot be treated as separate local problems. The Planning Board should therefore assist Victoria's traffic engineer in his duties as part of its regional program.

10. Irrigation:

Rainfall during the growing season on the Saanich peninsula is considerably less than that required for optimum growth of most crops.* At the same time much of the soil in the peninsula is excellently suited for irrigation and its productivity would be greatly increased by it. What are the prospects for irrigation?**

This problem has received considerable study during the last few years by the Water Rights Branch of the B.C. Department of Lands and Forests. The results of these studies may be summarized briefly as follows:

(a) Altogether about 20,000 acres of land are considered suitable for irrigation. To irrigate this whole area it would be necessary to construct a separate large diameter main from Japan Gulch to Saanich, assuming that the Greater Victoria Water District would in any case provide additional storage in Sooke Lake and build the tunnel from the lake to Japan Gulch. The capital cost of mains alone would amount to about 40 dollars per acre per year.[x] If only 10,000 acres were irrigated this cost would be 50 dollars per acre per year. To this would have to be added the costs of operation and maintenance, distribution pipes and sprinkler heads, and water itself.[xx] In sum the annual cost per acre might range from about 70 dollars per year upwards, depending on circumstances.

(b) If use were made of Elk Lake water, surplus to the needs of established users of this system, it would be possible to irrigate perhaps 1000 acres in the Bear Hill area at a

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*The deficiency has been calculated at various amounts up to 12 inches, depending on the crop concerned.

**This discussion applies only to areas where no supply main exists and to which irrigation water would have to be brought from some large source. It is believed that where water mains already exist irrigation is usually economically feasible.

[x]These estimates were based on 1950 costs and interest rates as detailed in A Report on Saanich Irrigation Investigations, Water Rights Branch, Department of Lands and Forests, 1950.

[xx]Administration and operating costs have been estimated at 5 to 8 percent of capital costs. The cost to the individual of supplying a portable distribution and sprinkler system has been estimated at 80 to 100 dollars per acre. The cost of water would depend on the amount used and the rate charged.

total cost of perhaps 50 dollars per acre per year.* This would depend on the use of water not normally used by the defence establishments but reserved by them for emergency use. In other words, its availability could not be guaranteed. If, however, the system were to be taken over by Saanich and the demands of the defence establishments limited to everyday requirements, this objection would be overcome.

The cost of irrigation which could profitably be borne must of course depend on the value of the crop and the increase in yield expected. This bearable cost is a matter of considerable controversy, but limits of 15 dollars per acre for mixed farming and 30 dollars for special crops (such as fruit farming in the Okanagan) are sometimes mentioned. Even allowing for a margin of error, it is seen that if supply costs were as estimated by the Water Rights Branch, irrigation would not normally be feasible unless substantial subsidy or assistance were made available by some level of government.

Apart from cost another factor makes extensive irrigation a difficult matter. That is the instability of land or, in other words, the possibility that it may be subdivided for non-agricultural purposes. No body could be expected to assume responsibility for irrigation systems which might be required only for a short and indefinite period. Neither could any government entertain the thought of subsidy under these conditions. It is clear, therefore, that the prime movers in any large irrigation scheme must be the growers themselves, and that only cooperative action by them on an adequate scale could justify government participation.

In sum, the outlook for irrigation is not promising, and perhaps small-scale operation by individuals or groups based on high-value crops with small water requirements is all that can be expected.

11. Parliament Buildings Area:

The Capital Region has two distinct focal points - the downtown area, which is the centre of business and commerce for the Region, and the James Bay area centred on the Parliament Buildings and the Empress Hotel. The former has three separate aspects. It is the biggest single centre of employment in the Region; the seat of government and thus a symbol of the people of the province; and the first close-up impression which the seaborne visitor gets of the Capital City of British Columbia.

The last two aspects call for special care and thought in planning and zoning. First, much can be done to enhance the appearance of the area by careful zoning of its immediate surroundings. In general

*Based on A Report on the possibility of pumping from Elk Lake for the irrigation of Saanich, Water Rights Branch, 1952.

it will add to the quietness and dignity of the government buildings and would also make it possible for them to exapand without unnecessary expense if their immediate surroundings are zoned for residential use, commercial and industrial development being barred. Second, careful planning of the street system for some distance around the area can help to prevent commercial and industrial traffic pouring through it and can also facilitate evacuation of peak-hour traffic.

This area has unusual possibilities. It has imposing buildings, a foreground of water with hills far beyond, and an unusually fine park nearby. It invites the closest cooperation between the provincial government and the City of Victoria in its development and administration, and in this matter the Capital Region Planning Board, on which both parties are represented, can play a useful part.

12. The Capital Region:

The Capital Region as now defined by law is not a logical planning area. At present it stops short near Thetis Lake and does not include the Highlands District of the Saanich peninsula. It can be expected that comparatively soon, and especially when the new Thetis Lake highway is completed, and if a West Coast road is built, there will be considerable development in the Langford and Metchosin areas. If the Region is to be logically complete and planning is to achieve its full value - remembering that planning is more effective before the event than after - its boundaries should be amended to include all of the area studied in this report. It is therefore recommended that the Capital Region Planning Board request the Minister of Municipal Affairs to amend the boundaries of the Region to include the whole of the Saanich peninsula and the area south of the boundary of the Esquimalt and Nanaimo Land Grant District.

VIII THE CAPITAL REGION PLANNING BOARD

In the Capital Region Planning Board, the municipalities of the Region and the Provincial Government have created a tool with considerable potential value. Its particular virtues are (1) that it brings representatives of the municipalities and the Provincial Government together in a properly constituted, permanent body, with power to study matters of inter-municipal or regional concern (2) that it is now acquiring a full-time staff trained in city planning and related fields. It is thus able to undertake a wide variety of duties, including the following:

1. To prepare and maintain regional and metropolitan plans for land development, major streets and parks;

2. To assist town planning commissions in preparing, maintaining and administering plans for zoning, streets, parking and parks; to assist with the control of subdivision, if requested; and to assist municipal engineers and other officers in the planning of utilities or other facilities;

3. To assist existing inter-municipal bodies such as school boards, the Water District, and the Civil Defence Control Board with appropriate aspects of their work;

4. To advise on the layout of new subdivisions;

5. To act as a source of information to the general public on population, economics and land resources in the Region;

6. To cooperate with bodies such as the Chamber of Commerce in their promotional and development activities;

7. To advise and cooperate with provincial government departments, such as Public Works, Parks and Recreation, and Agriculture, on studies and plans for the Region;

8. To act as a standing body for the study of inter-municipal matters;

9. To act as a link between the municipalities as a group and the Provincial Government.

All these are tasks which will continue as long as the Region continues to grow. To fulfil them completely the Planning Board must achieve the closest possible relationship with the municipal administrations and must in fact become an integral part of them. If this is done the benefit which will accrue to the Region and all its people will be incalculable.

SUMMARY OF RECOMMENDATIONS:

1. Apart from its regional and metropolitan planning duties, the Planning Board should assist town planning commissions to prepare, maintain and administer their own development plans. It should also act in the widest possible way as a centre of information, assistance and coordination for the people and municipalities of the Capital Region. (for discussion see page 51)

2. Adequate control over residential development must be exercised by all municipalities, through zoning, control of subdivision and public works policies. This is by far the most important matter in the Region today. (for discussion see pages 37 - 40)

3. The Planning Board should collaborate with the Victoria Chamber of Commerce in a more selective industrial promotion program for the Region. (for discussion see page 43)

4. The Planning Board should request the Minister of Lands to make further investigations into the nature and extent of the Cordova Bay - Saanichton water table; to take such regulatory action as may be necessary to protect it from over-use; and to investigate its possible usefulness for irrigation. (for discussion see pages 24,44)

5. (a) The Planning Board should request the Minister of Lands and Forests to survey and reserve suitable beach and park areas in and around the Capital Region; and to authorize their development on a scale commensurate with the recreation needs of the area. (for discussion see pages 15,44)

   (b) The City of Victoria should investigate possible arrangements for developing Thetis Lake and Goldstream parks bearing in mind the greater facilities of the Parks and Recreation Division of the B.C. Department of Lands but with due regard for its own equity in these areas. (for discussion see page 47)

   (c) Consideration should be given by the citizens of the Region to the formation of a Regional Park Promotion Committee to promote the development of parks and the preservation of beauty spots in the Capital Region. (for discussion see page 47)

6. The Planning Board should, in collaboration with the Department of Transport, prepare plans for heliport sites in the Greater Victoria area. (for discussion see pages 33, 43)

7. The Planning Board should request the Minister of Municipal Affairs to amend the boundaries of the Capital Region to include the whole of the Saanich peninsula and the area south of the boundary of the Esquimalt and Nanaimo Railway Land Grant District. (for discussion see pages 1, 51)

APPENDICES

AND

BIBLIOGRAPHY

A P P E N D I C E S

Appendix A: 1951 Population

	Total	Male	Female
Victoria City Proper	51,331	24,075	27,256
Saanich D.M.	28,481	14,494	13,987
Central Saanich D.M.	2,069	1,059	1,010
Oak Bay D.M.	11,960	5,432	6,528
Esquimalt D.M.	10,153	6,372	3,781
Indian Reserves	309	145	164
North Saanich Pen.	3,894	1,947 est.	1,947 est.
S.West " " (Highland Dist.).	935	467 "	468 "
Area adjoining 6-mile Hill, part of Langford	999	500 "	499 "
Metchosin	1,233	616 "	617 "
Goldstream, part of Langford	1,000 est.	500 "	500 "
East Sooke - Rocky point	573	287 "	286 "
Otter Point - Sooke	987	494 "	493 "
View Royal	1,235	617 "	618 "
Indian Reserves	685	343 "	342 "
1951 Population	115,844	57,348	58,496

Appendix B: Working and non-working population, 1951

	Number of Persons*			Percent		
	Male	Female	Total	Male	Female	Total
In labour force	33,800	11,800	45,600	59.0	20.2	39.4
Not in labour force:						
Under 14 years of age	12,300	11,700	24,000	21.5	20.0	20.7
Retired or voluntarily idle	7,500	3,500	11,000	13.1	6.0	9.5
Keeping house	30	27,850	27,880	-	47.5	24.1
Going to school (14 years of age and over)	2,100	2,000	4,100	3.6	3.5	3.5
Other	1,620	1,640	3,260	2.8	2.8	2.8
Total Population	57,350	58,490	115,840	100.0	100.0	100.0

*Total population from 1951 census. Other figures are estimates made by the Bureau of Economics and Statistics, B.C. Department of Trade and Industry, based on 1951 census figures for the metropolitan municipalities and Division 5.

On the basis of the Greater Victoria Directory findings, approximately 3 out of 4 retired men supported wives. Those wives may also be regarded as retired persons, although the census lists them as housewives. If these women are included with the retired group, the overall total of those retired or voluntarily idle would be in excess of 16,000 rather than 11,000 and the overall ratio would be in excess of 14% rather than 9.5% as shown in Appendix B, page 55. It is felt that this would more accurately represent the situation.

Appendix C: General characteristics:

It may be pointed out from Appendix A that the sex ratio varies from municipality to municipality. In Victoria in 1951 there were 13 percent more women than men and in Oak Bay 20 percent more. In Saanich and Central Saanich men predominated by 3 and 5 percent, respectively. In Esquimalt the picture is completely unbalanced by the presence of the defence establishments, to the extent that there were 68 percent more men than women.

A number of other significant characteristics of the municipal populations are shown in the table on the following page. It is evident from this table that there are notable differences in age, family structure and income level between the several municipalities. For example, Oak Bay has the greatest proportion of people over 65, the smallest average household and family size and the largest average family income. Saanich, Central Saanich and Esquimalt have a much greater proportion of children than Victoria and Oak Bay.

Selected Population Characteristics - Greater Victoria Area 1951

Age Group	Victoria No.	%	Saanich No.	%	Oak Bay No.	%	Esquimalt No.	%	Central Saanich No.	%	Total No.	%
0 - 4	4,525	8.8	2,972	10.4	876	7.3	1,116	11.0	186	9.0	9,721	9.3
5 - 9	3,217	6.3	2,229	7.8	881	7.4	703	6.9	213	10.3	7,288	7.0
10 - 14	2,424	4.7	1,673	5.9	647	5.4	417	4.1	156	10.3	7,288	7.0
15 - 19	2,655	5.2	1,617	5.7	575	4.8	929	9.1	122	5.9	5.931	5.7
20 - 24	3,608	7.0	1,586	5.6	516	4.3	1,879	18.5	90	4.3	7,706	7.4
25 - 34	7,793	15.2	4,115	14.5	1,329	11.1	2,117	20.7	216	10.4	15,608	14.9
35 - 44	6,547	12.8	4,041	14.2	1,714	14.3	1,141	11.2	323	15.7	13,783	13.2
45 - 54	5,300	10.3	2,909	10.2	1,447	12.1	626	6.2	228	11.0	10,528	10.1
55 - 64	6,147	12.0	3,114	10.9	1,749	14.6	585	5.8	239	11.6	11,851	11.4
65 - 69	3,409	6.6	1,734	6.1	912	7.6	244	2.4	128	6.2	6,433	6.2
70 and over	5,706	11.1	2,491	8.7	1,314	11.0	396	3.9	168	8.1	10,089	9.7
Totals	51,331	100%	28,481	100%	11,960	100%	10,153	100%	2069	100.8	104,303	100%
Families	13,632	100	8,097	100	3,532	100	2,100	100	569	100	27,988	100
No children	6,379	47	3,555	44	1,727	49	672	32	246	43	12,592	45
1 - 2 children	5,821	43	3,527	44	1,473	42	1,117	53	223	39	12,177	43
3 - 4 "	1,263	9	905	11	310	9	292	14	85	15	2,870	11
5 - "	169	1	110	1	22	-	19	1	15	3	349	1
Persons/family	3.0		3.1		2.9		3.3		3.3		3.0	
Persons/household	3.1		3.1		3.0		3.3		3.1		3.1	
Births/1000 1947-51*	22.5		23.4		13.4		22.9		23.2**		22.2	
Deaths/1000 1947-51*	15.1		9.8		12.4		6.6		6.8**		12.7	
Households:												
Total	15,788	100	8,919	100	3,977	100	2,208	100	672	100	31,613	100
Single detached units	9,960	63	8,415	95	3,430	86	1,735	79	635	94	24,225	77
Apartments & flats	4,840	31	305	8	400	10	300	15	-		5,865	19
Duplexes and row houses	988	6	199	2	147	4	163	6	37	6	1,423	4

SOURCE: "Population and Housing Characteristics by Census Tracts, Victoria," Dominion Bureau of Statistics, Ottawa.

*Based on assumed straight-line growth of population from 1941 to 1951. **1951 records only.

Appendix D: The People At Work, 1954

ESTIMATE OF LABOUR FORCE IN THE CAPITAL REGION, 1954*
CLASSIFIED ACCORDING TO INDUSTRY

Industry Group	Male Number	Female Number	Total Number	Total Percent
Labour Force - All Industries	36,000	12,400	48,400	100.0
Agriculture	500	25	525	1.1
Forestry and Logging	500	10	510	1.1
Fishing and Trapping	150	5	155	.3
Mining and Quarrying	50	-	50	.1
Manufacturing	6,100	700	6,800	14.0
Foods and Beverages	700	190	890	1.8
Tobacco and Tobacco Products	-	-	-	-
Rubber Products	-	-	-	-
Leather Products	40	5	45	.1
Textile Products (except clothing)	50	30	80	.2
Clothing (textile and fur)	40	35	75	.2
Wood Products	2,200	120	2,320	4.7
Paper Products	350	50	400	.8
Printing, Publishing and Allied Industries	500	80	580	1.2
Iron and Steel Products	500	10	510	1.1
Transportation Equipment	1,300	60	1,360	2.8
Non-ferrous Metal Products	70	20	90	.2
Electrical Apparatus and Supplies	30	-	30	.1
Non-metallic Mineral Products	100	10	110	.2
Products of Petroleum and Coal	10	-	10	-
Chemical Products	150	60	210	.4
Miscellaneous Manufacturing Industries	60	30	90	.2
Electricity, Gas and Water	500	80	580	1.2
Construction	3,400	75	3,475	7.2
Transportation and Storage	3,400	175	3,575	7.4
Communication	300	300	600	1.2
Trade	5,700	2,650	8,350	17.2
Retail	4,300	2,500	6,800	14.0
Wholesale	1,400	150	1,550	3.2
Finance, Insurance and Real Estate	1,200	860	2,060	4.3
Service	14,200	7,520	21,720	44.9
Community	1,800	2,500	4,300	8.9
Defence Services[x]	6,300	800	7,100	14.6
Other Federal Government	900	500	1,400	2.9
Municipal Government	1,000	100	1,100	2.3
Provincial Government	1,500	1,300	2,800	5.8
Recreation	200	120	320	.7
Business	500	200	700	1.4
Personal	2,000	2,000	4,000	8.3

*Compiled by the Bureau of Economics and Statistics, B.C. Department of Trade and Industry on basis of 1951 census data.

[x]Includes armed forces and civilians working for National Defence, or in naval dockyard.

Appendix E: Basic and Community-service Breakdown*

An attempt to segregate "basic" and "community-service" industries in 1954 gives the following results. This breakdown is necessarily approximate but at least gives a fair picture of the major factors which govern the growth of the region.

Community Service Occupations:

Primary	400	
Manufacturing	3300	
Utilities, transportation and communications	4800	
Construction	3500	
Trade	8400	
Finance, Insurance, Real Estate	2000	
Service	9600	
		32,000

Basic Occupations:

Defence services	3500	
Federal Government[x]	5000	
Provincial Government	2800	
Shipbuilding	1200	
Wood and paper	2200	
Primary	900	
Hotels	800	
		16,400
Total		48,400

*Based on an estimate by the Bureau of Economics and Statistics, which was based on 1951 census data.

[x]Including Dockyard personell not in defence services.

Appendix F: Investment Income:

Distribution of Taxable Income Tax Returns For Metropolitan Victoria and British Columbia, 1951

	Greater Victoria		B. C.
Number of Declared Taxable Returns	28,110		
Sources of Income:	$*	%	%
Wages and Salaries	70,068	78.63	81.78
Business Income	4,743	5.32	8.26
Professional Income	2,636	2.96	2.82
Commission Income	915	1.03	1.18
Farm Income	62	.10	.61
Total Earned Income Declared	78,424	88.04	94.65
Dividends	5,844	6.56	2.24
Bond Interest	1,025	1.15	.63
Bank Interest	214	.24	.14
Net Rental Income	1,040	1.17	.96
Mortgage Interest	210	.24	.25
Annuity Income	109	.12	.06
Estate Income	2,096	2.35	.86
Other Investment Income	23)-	.13	.21
Miscellaneous Income	89)		
Total Investment Income Declared	10,650	11.96	5.35
Total Income Declared	89,074	100.00	100.00

SOURCE: Taxation Statistics, Department of National Revenue, Ottawa.

*All money figures represent thousands of dollars.

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